DOCUMENT RESUME

ED 457 333 CE 082 333

AUTHOR	Thirtle, Michael R.
TITLE	Educational Benefits and Officer-Commissioning Opportunities Available to U.S. Military Servicemembers.
INSTITUTION	National Defense Research Inst., Santa Monica, CA.
SPONS AGENCY	Office of the Secretary of Defense (DOD), Washington, DC.
REPORT NO	MR-981-OSD
ISBN	ISBN-0-8330-2699-2
PUB DATE	2001-00-00
NOTE	106p.
CONTRACT	DASW01-95-C-0059
AVAILABLE FROM	RAND, P.O. Box 2138, Santa Monica, CA 90407-2138 ($13). Tel: 877-584-8642 (Toll Free); Fax: 310-451-6915; e-mail: order@rand.org; Web site: http://www.rand.org/publications/. For full text: http://www.rand.org/publications/MR/MR981/.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Armed Forces; College Bound Students; College Students; Comparative Analysis; *Educational Benefits; Educational Finance; Educational Mobility; Educational Opportunities; Enrollment Influences; *Fringe Benefits; Graduate Study; High Schools; Literature Reviews; Loan Repayment; *Military Personnel; Military Service; Military Training; Policy Formation; Postsecondary Education; *Promotion (Occupational); Public Policy; *Recruitment; Role of Education; Student Financial Aid; Student Loan Programs; Tuition Grants; Veterans; Veterans Education
IDENTIFIERS	Army; G I Bill; Marine Corps; Military Occupations; *Military Recruitment; Navy; Officer Candidate School; Reserve Officers Training Corps

ABSTRACT

The educational benefits and officer-commissioning opportunities available to U.S. military service members were reviewed to identify ways of attracting college-eligible youth into the military. Data were collected through a review of published directives and reports, interviews with personnel within the military services, a review of historical information, and Internet research. The study focused on the following topics: (1) ways to join the active-duty military; (2) officer accession methods across the military services; (3) ways military personnel pursue voluntary education; (4) military sources for funding postsecondary education; and (5) the role of education in the military promotion process. The following were among the major conclusions drawn from the review: (1) the three primary sources of commissioned officers in the U.S. military are the federal service academies, the Reserve Officer Training Corps and Officer Training/Candidate School; (2) although enlisted personnel have several methods for earning officer commissions, the number of slots for the available programs is limited; (3) many opportunities exist for active-duty military personnel to further their civilian education; and (4) the importance of advanced education in the military promotion process is not transparent. (Thirty-four tables/figures are included. A brief description of the U.S. military is appended. Contains 59 references.) (MN)

Reproductions supplied by EDRS are the best that can be made
from the original document.

CE

ED 457 333

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

J. Ryan

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

RAND

Educational Benefits and Officer-Commissioning Opportunities Available to U.S. Military Servicemembers

Michael R. Thirtle

National Defense Research Institute

CE0822333

BEST COPY AVAILABLE

RAND

Educational Benefits and Officer-Commissioning Opportunities Available to U.S. Military Servicemembers

Michael R. Thirtle

Prepared for the
Office of the Secretary of Defense

National Defense Research Institute

3

Approved for public release; distribution unlimited

The research described in this report was sponsored by the Office of the Secretary of Defense (OSD). The research was conducted in RAND's National Defense Research Institute, a federally funded research and development center supported by the OSD, the Joint Staff, the unified commands, and the defense agencies under Contract DASW01-95-C-0059.

Library of Congress Cataloging-in-Publication Data

Thirtle, Michael R., 1967–
Educational benefits and officer-commissioning opportunities available to U.S. military servicemembers / Michael R. Thirtle.
p. cm.
"Prepared for the Office of the Secretary of Defense by RAND's National Defense Research Institute."
"MR-981-OSD."
Includes bibliographical references (p.).
ISBN 0-8330-2699-2
1. United States—Armed Forces—Recruiting, enlistment, etc. 2. United States—Armed Forces—Officers—Education. 3. College attendance—United States. 4. United States—Armed Forces—Promotions. 5. Bounties, Military—United States. I. United States. Dept. of Defense. Office of the Secretary of Defense. II. National Defense Research Institute (U.S.). III. Title.
UB323.T45 2001
355.1—dc21 99-10040
CIP

RAND is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND® is a registered trademark. RAND's publications do not necessarily reflect the opinions or policies of its research sponsors.

© Copyright 2001 RAND

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from RAND.

Published 2001 by RAND
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138
1200 South Hayes Street, Arlington, VA 22202-5050
201 North Craig Street, Suite 102, Pittsburgh, PA 15213-1516
RAND URL: http://www.rand.org/
To order RAND documents or to obtain additional information, contact Distribution Services: Telephone: (310) 451-7002; Fax: (310) 451-6915; Email: order@rand.org

Preface

This report provides background and contextual information for a more comprehensive RAND report that explores ways of attracting college-eligible youth into the military, *Attracting College-Bound Youth into the Military: Toward the Development of New Recruiting Policy Options* (MR-984-OSD). Therefore, it necessarily reports information on policies and programs that were in place at the same time as the policies discussed in that publication. It supports RAND research on the accession of military personnel, sponsored by the Director of Accession Policy within the Office of the Assistant Secretary of Defense, Personnel and Readiness. This document reports research on four major topics related to educational and commissioning opportunities available to servicemembers in 1998: (1) the officer accession process across all military services, (2) how servicemembers pursue voluntary education, (3) military sources for the funding of post–secondary education, and (4) the role of education in the promotion process.

This research was performed in the Forces and Resources Policy Center of RAND's National Defense Research Institute, a federally funded research and development center supported by the Office of the Secretary of Defense, the Joint Staff, the unified commands, and the defense agencies.

Contents

Preface iii

Figures vii

Tables ix

Summary xi

Acknowledgments xxi

Abbreviations and Acronyms xxiii

1. INTRODUCTION 1
   - Background 1
   - Purpose and Methodology 2
   - Organization of the Report 4

2. CONTEXTUAL INFORMATION 5
   - Ways to Join the Active-Duty Military 5

3. COMMISSIONED OFFICERS 8
   - How to Become an Officer—the Necessity of a College Education 8
   - Types of Officers—Different Commissions and Different Components 10
   - Officer Accession Methods That Are Common to All Services 11
     - Service Academies 13
     - The Reserve Officer Training Corps (ROTC) 14
     - Officer Candidate School/Officer Training School 18
     - Direct Appointments 19
     - Comparison of the Accession Sources 20
     - Academy Preparatory Schools 23
   - Unique Forms of Earning a Commission Within the Services 24
     - Air Force 25
     - Marine Corps 27
     - Army 29
     - Navy 29
     - Comparison of the Unique Commissioning Programs 31

4. METHODS AND FINANCING OF VOLUNTARY POST-SECONDARY EDUCATION 34
   - Current Department of Defense Policy 34
     - DoD Directive 1322.8 34
     - DoD Instruction 1322.25 35
   - Enlisted Voluntary Educational Opportunities 36
     - Active-Duty Enlisted Educational Levels Across the Services 36
     - High School Degree Program 38
     - Community College of the Air Force 39
     - Servicemembers Opportunity Colleges 40
     - Navy Program for Afloat College Education 42

Credit for Experience 43
Results from the DoD Voluntary Education Program 43
Other Education Programs 45
Officer Educational Opportunities for Advanced Degrees 46
Use of Tuition Assistance Under the Voluntary Education System 46
Special Advanced-Degree Programs 48
Methods of Financing Post–Secondary Education 49
Tuition Assistance 50
Montgomery GI Bill 53
College Fund 55
Loan Repayment Program 56
Veteran's Education Assistance Program 56
Comparison of Financing Alternatives 58

5. THE ROLE OF EDUCATION IN THE MILITARY PROMOTION PROCESS 60
Enlisted Promotions 60
Army Enlisted Promotion System 61
Navy Enlisted Promotion System 63
Marine Corps Enlisted Promotion System 64
Comparison of Enlisted Promotion Processes 66
Officer Promotions 67

6. CONCLUSIONS 70

Appendix: A BRIEF DESCRIPTION OF THE U.S. MILITARY 73

Bibliography 79

Figures

1.1. High-Quality Enlisted Accessions 2
2.1. Educational Levels of Military Personnel (CY96) 6
2.2. Choices Available to College-Eligible Youth 7
3.1. Percentage of Officers Possessing 4-Year-College Degrees 10
3.2. Typical Methods of Becoming an Officer in the Military 13
3.3. DoD Officer Accessions by Commissioning Source (FY80–FY97) . . . 22
3.4. Sources of Commission for Active-Duty Officers (FY97) 23
3.5. Enlisted Commissioning Opportunities Unique to the Air Force . . . 25
3.6. Enlisted Commissioning Opportunities Unique to the Marine Corps 28
3.7. Enlisted Commissioning Opportunities Unique to the Navy 30
4.1. Educational Level of Enlisted Servicemembers 37
4.2. Historical Charting of Enlisted Educational Levels 37
4.3. Number of High School Degrees/GEDs Funded by DANTES 39
4.4. Process for Earning a Degree Within the SOC Program 42
4.5. Number of DANTES-Administered Tests from FY92 Through FY96 44
4.6. Number of Associate's Degrees Awarded 44
4.7. Number of Bachelor's Degrees Awarded 45
4.8. Number of Individuals Enrolled in Graduate Programs Under the DoD Voluntary Education Program 47
4.9. Number of Graduate Degrees Awarded 47
4.10. Total DoD Voluntary Education Program Expenditures 51
4.11. DoD Voluntary Education Expenditures per Enrolled Student 51
A.1. Active-Duty Personnel, by Service (CY96) 74
A.2. Relationship of Active, Reserve, and Guard Forces in the Total Military Force Mix (CY96) 75

Tables

S.1. Comparison of Active-Duty Accession Sources xiv
S.2. ROTC Program Benefits xv
S.3. Unique Enlisted-to-Officer Commissioning Programs xvi
S.4. Comparison of Funding Sources xviii
3.1. Education Levels of the Commissioned Officer Corps 9
3.2. Service Components and Officer Commissions 12
3.3. ROTC Program Benefits 18
3.4. Comparison of Accession Sources 21
3.5. Unique Enlisted-to-Officer Commissioning Programs 33
4.1. Cumulative Servicemembers Opportunity Colleges and Student Enrollments Through May 1997 41
4.2. Tuition Assistance Opportunities 53
4.3. Comparison of Funding Sources 59
5.1. Promotion Points for Army E-5 and E-6 62
5.2. Navy Promotion Points for E-4 Through E-7 63
5.3. Examples of Awards and Promotion Points for Navy E-4 Through E-6 64
5.4. Marine Corps Promotion Points for E-4 and E-5 65
5.5. Courses and Promotion Points 65
A.1. Commissioned-Officer Grades and Ranks 76
A.2. Warrant-Officer Grades and Ranks 77
A.3. Enlisted Grades and Ranks 78

Summary

The U.S. military has undergone significant changes since the drawdown of forces began in the late 1980s. Although personnel levels have decreased by approximately 30 percent since 1987 (the height of military spending and personnel levels in the 1980s), the requirement for attracting high-quality individuals has not. In fact, many in the services contend that the exact opposite has occurred: The drawdown has placed even greater emphasis on recruiting good people to serve in the military. In reality, the percentage of high-caliber servicemembers has increased steadily over the years as evidenced by educational attainment levels and Armed Forces Qualification Test (AFQT) scores. It is not clear whether or not this increase in quality is due solely to the supply side or the demand side of the accessions' equation: The supply of quality accessions has increased during the same time because the combined pool of high school and college graduates from which to draw is larger,[1] and the military has raised its standards for recruiting higher-quality individuals.[2]

As evidenced by the content of the FY97 Quadrennial Defense Review (QDR), there appear to be two trends that will foster the need for quality servicemembers into the twenty-first century as well: (1) future drawdowns will continue to require that the services accomplish more with relatively fewer personnel resources[3] and (2) the demand for servicemembers with technical and analytical aptitudes for operating complex, military hardware and software will continue.[4] These observations are couched within the context of two important phenomena: (1) a U.S. labor market that is currently at one of its lowest rates of unemployment in contemporary history, and (2) an increased demand in the private sector for highly skilled people.[5] In light of these challenges, the DoD

---

[1]National Center for Education Statistics, *The 1996 Digest of Education Statistics*, Washington, D.C.: Department of Health, Education, and Welfare, Education Division, 1996, Tables 98, 239. Although the number of high school graduates dropped by 4.5 percent from 1986 to 1996, the number of associate's and bachelor's degrees conferred increased by 22.4 and 20.55 percent, respectively, during the same period. This resulted in a 4.4-percent increase in the combined supply of individuals with high school diplomas, and associate's and bachelor's degrees.

[2]Office of the Assistant Secretary of Defense (Force Management Policy), *Population Representation in the Military Services*, Washington, D.C., November 1996, p. vi.

[3]William S. Cohen, Secretary of Defense, *Report of the Quadrennial Defense Review*, Washington, D.C., May 1997, p. 17.

[4]Office of the Assistant Secretary of Defense (Force Management Policy), *Population Representation in the Military Services*, Washington, D.C., November 1996, p. 2-1.

[5]See the following works for more information on the subject of private-sector demand for high-skilled personnel: T. Bailey, *Changes in the Nature and Structure of Work: Implications for Skill*

will be required to develop a strategic plan to ensure that the services continue to maintain quality forces.

In support of such a plan, this report provides an inventory of the educational benefits and officer-commissioning programs that are available in the active-duty U.S. military. It provides background information for a more comprehensive RAND report, *Attracting College-Bound Youth into the Military: Toward the Development of New Recruiting Policy Options*, that includes analytic work and statistical analysis. Therefore, the information in this report necessarily reflects policies and programs that were in effect at the time of production of the report it supports. The purpose of this report is descriptive, not prescriptive. It does not recommend or specify those educational or commissioning programs that are the most effective or efficient. Nor does it make judgments on the efficacy of the services' programs. This inventory of programs serves as a baseline for understanding what opportunities for quality improvement and personal advancement were in place in the Department of Defense (DoD) in late 1998.

To facilitate my research, I asked the following questions:

How do individuals join the military? There are many ways of joining the military. Likewise, there are choices to be made during this decisionmaking process. Aside from deciding which service to choose, and whether to be in the active-duty forces or the reserves, an individual must also decide whether to be an officer or an enlisted servicemember. Each choice requires a different level of commitment, experience, and education. Likewise, such decisions are driven by a different set of expectations and tastes. Of officer accessions in today's military, 99 percent are college graduates; of enlisted servicemembers, about 94 percent are high school graduates. A prospective enlistee works with a military recruiter from a service; a prospective officer candidate has myriad ways of inquiring into service, including the use of military recruiters, liaison officers, and Reserve Officer Training Corps (ROTC) detachment personnel.

What are the various commissioning sources and methods for becoming an officer in the U.S. military? There are three primary sources of officer commissioning in the U.S. military—the federal service academies, the ROTC, Officer Training/Candidate School (OTS/OCS)—and direct appointments.

Service academies can trace their lineage to 1802 when the Army founded the U.S. Military Academy at West Point, New York. The Navy and Air Force also

---

Requirements and Skill Formation, Berkeley, Calif.: National Center for Research in Vocational Education, MDS-007, May 1990; L. M. Hanser, *Understanding the Skills Gap: Approaches from Job Analysis*, Berkeley, Calif.: National Center for Research in Vocational Education, MDS-1027, November 1996.

have their own service academies located at Annapolis, Maryland, and Colorado Springs, Colorado, respectively. The Marine Corps does not have a service academy dedicated specifically to its needs, but relies upon Annapolis for its share of service academy graduates: In 1997, approximately 15 percent of Annapolis graduates became Marines.[6] All academy cadets receive bachelor's degrees upon graduation and are commissioned as second lieutenants or ensigns (Navy). A limited number of academy graduates are permitted to serve in other services (e.g., a Naval Academy graduate might be commissioned into the Air Force).

The Reserve Officer Training Corps can trace its roots to the Civil War, when the Land Grant Act of 1862 was passed. Today, more than 600 colleges and universities throughout the United States have ROTC programs, making ROTC the largest source of commissioned officers. Within each service, different types of ROTC scholarships and benefits are available. The Army, Navy, and the Air Force have ROTC programs; students who desire to become Marine Corps officers take the Marine Corps option under Navy ROTC. As with academy graduates, ROTC graduates receive a commission upon completion of their ROTC training.

Officer Candidate School was initiated during World War I and has served as the most flexible source of commissioned officers since that time. Although similar in duration and identical in purpose to the OCS of other services, the Air Force refers to its training as Officer Training School. For the most part, OCS/OTS requires that an individual have a college education prior to attending; some Marine Corps and Navy enlisted-officer commissioning programs that use OCS do not require a 4-year degree.

Direct appointments serve as the means for commissioning officers with professional skills, such as doctors, lawyers, and chaplains. Training varies by service but tends to last 3–5 weeks. Individuals commissioned through the Direct Appointment program usually tend to enter the service at a higher grade because of their professional credentials (education and experience). Advanced grade is based on a constructive credit computation (see 10 U.S.C., Section 533).

Table S.1 summarizes the major characteristics of the commissioning programs.

Do these sources vary by service? Whereas the Marine Corps relies most heavily upon OCS, the Air Force and the Army draw upon ROTC for the bulk of

[6]U.S. Naval Academy graduates comprised roughly 12 percent of new-officer accessions in FY97. *U.S. Marine Corps Almanac*, January 1998, p. 32.

Table S.1

Comparison of Active-Duty Accession Sources

Category	Service Academy	ROTC	OCS/OTS	Direct Appointment
Duration	4 years; full-time status	1–4 years depending on scholarship; part-time status	10–16 weeks, full-time	3–5 weeks, full-time
Benefits	All educational expenses paid $600/month stipend Commission as an officer	Depend on scholarship type Commission as an officer	Paid training Commission as an officer	Paid training Commission as an officer
Service obligation	8 years total (at least 5 years' active duty)	8 years total (at least 4 years' active duty if scholarship; 2–3 years if non-scholarship)	8 years total (at least 4 years' active duty)	Depends on specific program
Rank upon graduation	Second Lieutenant/ Ensign (Navy)	Second Lieutenant/ Ensign (Navy)	Second Lieutenant/ Ensign (Navy)	Depends on occupational specialty, constructive credit computation; usually Second Lieutenant-Captain/Ensign-Lieutenant (Navy)

their officer corps. The Navy has a more balanced program. Each service offers different types of monetary incentives, which are described in Table S.2.

Likewise, the process by which enlisted servicemembers can earn officer commissions also varies greatly by service. Although the Air Force, the Navy, and the Marine Corps have many special programs available for educating and subsequently commissioning enlisted servicemembers, the Army relies primarily upon the use of direct application to OCS and the West Point preparatory school for admission to its service academy—avenues that are also available to the other services. Examples include the Airman Education and Commissioning Program (AECP), the Airman Scholarship and Commissioning Program (ASCP), Scholarships for Outstanding Airman to ROTC (SOAR), the Professional Officer Course–Early Release Program (POC-ERP), Broadened Opportunity for Officer Selection and Training (BOOST), Marine Corps Enlisted Commissioning

Table S.2

ROTC Program Benefits

Category	Army	Navy/Marine Corps	Air Force
Duration of scholarships	2–4 years	2–4 years	1–4 years[a]
Maximum level of scholarships	Tier 1a:[b] $20,000/year Tier 1:[c] $12,800/year Tier 2:[c] $9,000/year Tier 3:[c] $5,000/year Tier 4: $3,000/year for up to two years (junior and senior years)	Every scholarship is for full tuition	Type 1: full tuition and most fees Type 2: tuition and fees up to $9,000/year for 4 years; allows increase of up to 80 percent of tuition after freshman year Type 3: $2,000/year for up to two years as part of the Professional Officers Course (junior and senior years)
Other scholarship benefits	All types of awards provide for books, most fees, and $1,500/year	All types of awards provide for books, most fees, and $1,500/year	All types of awards provide for books, most fees, and $1,500/year
Nonscholarship program	Provides uniforms, textbooks, and $150/month for up to 20 months (junior and senior years)	Provides uniforms, textbooks, and $150/month for up to 20 months (junior and senior years)	Provides uniforms, textbooks, and $150/month for up to 20 months (junior and senior years)

[a]The 1-year scholarship is designed to meet production shortfalls in certain fields—currently, nursing and meteorological students in their junior year are eligible for this program.

[b]Tier 1a is only available at certain colleges and universities having higher-than-average tuition requirements. Examples of Tier 1a schools are Vanderbilt and Duke University. Generally speaking, the more generous scholarships are competitively awarded to students who are both (1) higher quality and (2) attending universities that have higher tuition.

[c]For limits on Types 1, 2, and 3 scholarships, see the AF Enlisted Website, http://www.afoats.af.mil/Opportunities/Enlisted/af-enlisted.htm.

Education Program (MECEP), the Meritorious Commissioning Program (MCP), and the Enlisted Commissioning Program (ECP). Although myriad enlisted-officer commissioning programs appear to be available, it is not clear that these programs currently have a significant impact on officer-corps accessions, because the number of participants is limited. Table S.3 describes unique[7] enlisted-officer-commissioning programs, their benefits, and the type of commissioning

[7]In this sense, *unique* refers to those programs that are not common across all services.

Table S.3

Unique Enlisted-to-Officer Commissioning Programs

Program	Education Benefits	Duration of Program	Other Benefits	Commissioning Source
		Air Force		
AECP	Full tuition	1–4 years, full-time	Promoted to E-5 and given full pay while in school	OTS
Bootstrap	Must pay own tuition	Must last for less than 1 year	Full pay at current rank	OTS
ASCP	Type 2 ROTC scholarship	1–4 years	ROTC benefits	ROTC
SOAR	Type 1 ROTC scholarship	1–4 years	ROTC benefits	ROTC
POC-ERP	Type 3 ROTC scholarship	2 years	ROTC benefits	ROTC
Medical Service Corps	On active duty for Commissioned Officer Training phase of OTS	3–5 weeks		Direct appointment
		Marine Corps		
BOOST	Prep are for ROTC, MECEP, or academy	1 year	Paid training	Naval Academy, ROTC, or through OCS via MECEP
MECEP	Must pay own tuition	1–4 years, full-time	Full pay at current rank	OCS
MCP	None	16 weeks	Paid training	OCS
		Army		
Green-to-Gold	ROTC Scholar-ship	2–4 years	ROTC benefits	ROTC
		Navy		
BOOST	Prep are for ROTC or academy	1 year	Paid training	Naval Academy or ROTC
Seaman-to-Admiral	Eventually will attend a 4-year degree program at the Naval Postgraduate School	10 weeks	Paid training; eventual follow-on 4-year degree program after OCS	OCS
ECP	Must pay own tuition	1–3 years	Full pay at current rank	OCS

source (academy, ROTC, OCS/OTS, or direct appointment) through which the individual is commissioned.

How do servicemembers pursue training and post–secondary education? Servicemembers have several avenues for earning college degrees; in general, there are two ways that individuals pursue education: (1) attending school part-time and using tuition assistance or other financial means (see discussion below) or (2) special programs of full-time study at either military schools or civilian universities. For enlisted servicemembers, the latter method generally involves the opportunity to earn an officer's commission through one of the various enlisted-officer commissioning programs. For officers, special programs focus on earning graduate degrees at military institutions such as the Naval Postgraduate School or the Air Force Institute of Technology, or at civilian universities. For both enlisted and officers, selection for these types of special programs is highly competitive. For individuals not selected for special academic programs, the military services provide funding for taking college courses on a part-time basis, through the DoD Voluntary Education Program.

What are the financial resources available to servicemembers to pay for their post–secondary education? Many opportunities exist for active-duty military personnel to finance their civilian education. All the services offer both tuition assistance (TA) and competitive, special programs. The Army, Marine Corps, and the Navy attract personnel into the enlisted corps by use of the College Fund, which promises money for school after the military. The College Fund is an additional source, over and above the Montgomery GI Bill.

All enlisted personnel can get the Montgomery GI Bill, but only selected personnel are eligible to get the College Fund. Usually, an enlistee needs to be a high-quality recruit who is entering a hard-to-fill occupation. The Air Force does not have a College Fund and uses the Community College of the Air Force, technical experience, special programs, and TA for educating its personnel while they are on active duty. The Montgomery GI Bill is used by all of the services. Although many equate use of the GI Bill with separation from the military and full-time college attendance, it is also possible to use benefits from the Program while on active duty. The Army and Navy also have a Loan Repayment Program (LRP), which pays for servicemembers' education received prior to enlisting. Use of the LRP precludes MGIB enrollment. Table S.4 summarizes the funding sources for post–secondary education.

How do the services value post–secondary education relative to other promotion criteria? For the most part, this is a difficult question to answer by observing the current processes; more robust statistical analysis of recent promotions is needed.

Table S.4

Comparison of Funding Sources

Type	Benefit	Duration	Applicability	Officer or Enlisted
Tuition Assistance	75 percent of college tuition to specific maximum	Unlimited as long as funds exist	All services and all active-duty personnel	Both
Montgomery GI Bill	$15,830 maximum for education	Lasts up to 10 years after leaving service	All services. Army offers for less than 4-year enlistment; other services require 4-year enlistment	Usually just enlisted personnel
College Fund combined with GI Bill	$30,000 maximum for Marine Corps; $40,000 maximum for Army and Navy. In 1998, the maximum changed to $50,000 for these three services.	Lasts up to 10 years after leaving service	Navy, Marine Corps, Army; high-quality: specific occupation and terms of service	Usually just enlisted personnel
Loan Repayment Program	$65,000 maximum for Army; $10,000 maximum for Navy	Payment in one-third installments for each of first 3 years Army member is on active duty	Army and Navy	Enlisted
VEAP; no longer available for new accessions	$8,100 maximum (2-for-1 investment: member contributes up to $2,700; government pays up to $5,400)	Lasts up to 10 years after leaving service; deadline for MGIB conversion is November 1997	All services; only for individuals who entered between 1977 and 1985	Enlisted

In examining the promotion criteria of the various services, I found that the enlisted-promotion processes assign a small number of points for achieving formal, civilian education during a career. Job performance, time-in-grade, and technical skills appear to be the most important criteria for advancement, although level of education is known to board members reviewing senior NCO records for promotion and is part of the board members' subjective-evaluation process.

The value of advanced education relative to other factors within the officer-promotion process is even less transparent than that observed in the enlisted-promotion process. Unlike the enlisted-promotion process, no quantitative criteria are used in an officer's promotion to assess the weight of advanced education vis-à-vis other characteristics. However, in today's officer corps, few individuals beyond the rank of O-3 have less than a master's degree.

Acknowledgments

I thank Rebecca Kilburn, Beth Asch, and Susan Hosek for their guidance, suggestions, and forthright comments. I also extend my gratitude to Stephanie Williamson, who shared her preliminary work on an analysis of the enlisted-promotion process. In addition, a number of organizations were cooperative and provided me their time, data, and information, which greatly assisted me in accomplishing this effort. I give special thanks to the RAND Library, the Defense Manpower Data Center, and representatives from the services. Without their willing support, this report would not have been completed. Finally, Marian Branch provided outstanding editing support on multiple revisions of this document. Any errors included in this report are solely my responsibility.

Abbreviations and Acronyms

AACC	American Association of Community Colleges
AASCU	American Association of State Colleges and Universities
ACE	American Council on Education
ACT	American College Test
ADSC	Active-Duty Service Commitment
AECP	Airman Education and Commissioning Program
AFB	Air Force Base
AFIT	Air Force Institute of Technology
AFMPC	Air Force Military Personnel Center
AFP	Air Force Pamphlet
AFQT	Armed Forces Qualification Test
AFROTC	Air Force Reserve Officer Training Corps
ALMAR	All Marines Message
ASCP	Airman Scholarship and Commissioning Program
BOOST	Broadened Opportunity for Officer Selection and Training
BUPERS	Bureau of Naval Personnel
BUPERSINST	Bureau of Naval Personnel Instruction
CCAF	Community College of the Air Force
CHEA	Commission on Higher Education Accreditation
CLEP	College Level Entrance Program
CONAP	Concurrent Admissions Program
CY	Calendar year
DANTES	Defense Activity for Non-Traditional Education Support
DoD	Department of Defense
DOS	Date of Separation
DSST	DANTES Subject Standardization Test
ECP	Enlisted Commissioning Program
EEAP	Enlisted Education Advancement Program
FAA	Federal Aviation Administration
FY	Fiscal Year
GED	General Educational Development
GMAT	Graduate Management Admissions Test
GMC	General Military Course
GMP	General Marine Performance
GPA	Grade Point Average
GRE	Graduate Record Examination

IPZ	In the Primary Zone
IRR	Individual Ready Reserve
LRP	Loan Repayment Program
MCBUL	Marine Corps Bulletin
MCO	Marine Corps Order
MCP	Meritorious Commissioning Program
MECEP	Marine Corps Enlisted Commissioning Education Program
MGIB	Montgomery GI Bill
MOS	Military Occupational Specialty
NCO	Non-Commissioned Officer
NPGS	Naval Postgraduate School
NROTC	Navy Reserve Officer Training Corps
NTE	National Teacher Exam
OCS	Officer Candidate School
OTS	Officer Training School
PACE	Program for Afloat College Education
PFE	Promotion Fitness Examination
PLC	Platoon Leaders Course
POC	Professional Officers Course
POC-ERP	Professional Officers Course–Early Release Program
PRF	Promotion Recommendation Form
QDR	Quadrennial Defense Review
RIF	Reduction in Force
ROTC	Reserve Officer Training Corps
SAT	Scholastic Aptitude Test
SNCO	Staff Non-Commissioned Officer
SOAR	Scholarships for Outstanding Airman to ROTC
SOC	Servicemembers Opportunity Colleges
SOCAD	SOC Army Degrees
SOCED	SOC Education
SOCG	SOC Army National Guard
SOCMAR	SOC Marine Degrees
SOCNAV	SOC Navy Degrees
TA	Tuition Assistance
TDY	Temporary Duty Assignment
TIG	Time-in-Grade
TIS	Time-in-Service
TY	Then Year
USA	U.S. Army
USAF	U.S. Air Force

USAREC	U.S. Army Recruiting
U.S.C.	United States Code
USD (P&R)	Undersecretary of Defense, Personnel and Readiness
USMC	U.S. Marine Corps
USN	U.S. Navy
VA	Department of Veterans' Affairs
VEAP	Veteran's Educational Assistance Program
WAPS	Weighted Airman Promotion System

1. Introduction

Background

The United States military has undergone significant changes since the drawdown of forces began in the late 1980s. Although personnel levels have decreased by approximately 30 percent since 1987 (the height of personnel levels during the Cold War), the requirement for attracting high-quality individuals has not. In fact, many in the services would contend that the exact opposite has occurred: The drawdown has placed even greater emphasis on recruiting excellent people to serve in the military. Figure 1.1 shows the increase in the percentage of high-quality[1] enlisted accessions that occurred during 1980–1995. It is not clear whether or not this increase in high-quality accessions is due solely to the supply side or the demand side; rather, it is probably a combination of both: The supply of high-quality accessions has increased during the same time because of the larger pool of high school and college graduates from which to draw;[2] the military has also raised its standards for recruiting quality individuals.[3]

Intuitively, we can surmise that a force composed of higher-quality accessions has the capacity for being more effective.[4] Taking the same view, policymakers have continued to face three important questions related to accessions since the all-volunteer-force concept was initiated in 1973: (1) How large should the military be? (2) Who should be accepted? and (3) How can the military attract the best individuals?[5] Although the first question appears to have been

---

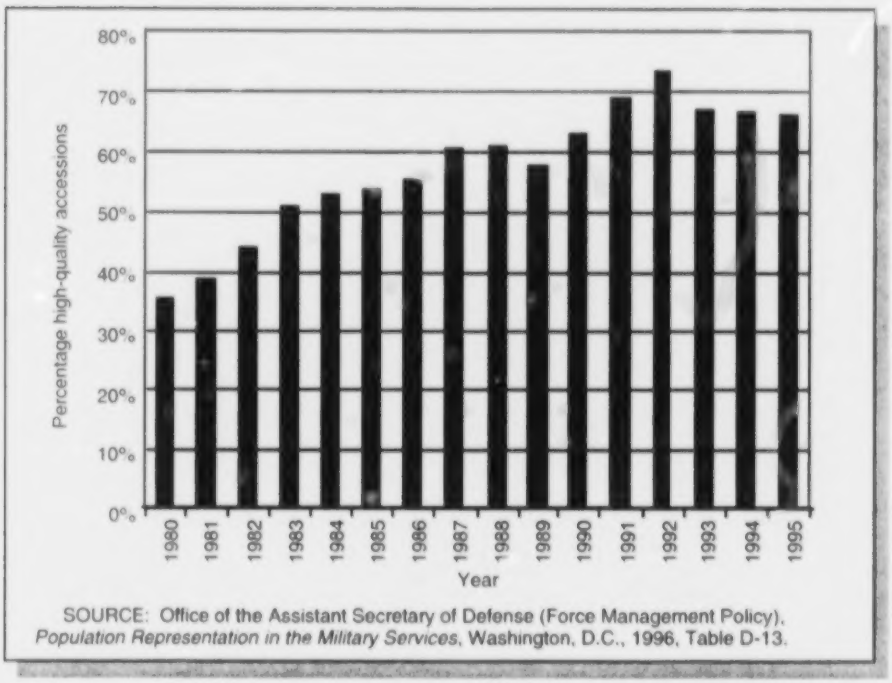
[1]*High quality* in this sense refers to new military accessions who are both high school diploma graduates (or higher) and who score above the 50th percentile on the Armed Forces Qualification Test (AFQT).

[2]National Center for Education Statistics, *The 1996 Digest of Education Statistics*, Washington, D.C.: U.S. Department of Health, Education, and Welfare, Education Division, 1996, Tables 98, 239. Although the number of high school graduates dropped by 4.5 percent from 1986 to 1996, the number of associate's and bachelor's degrees conferred increased by 22.4 and 20.55 percent, respectively, during the same period. These increases resulted in a 4.4-percent increase in the combined supply of individuals with high school diplomas, and associate's and bachelor's degrees.

[3]Office of the Assistant Secretary of Defense (Force Management Policy), *Population Representation in the Military Services*, Washington, D.C., November 1996, p. vi.

[4]This discussion does not consider the efficiency (or cost-productivity trade-off) aspect of how high-quality assets contribute to an organization.

[5]Glenn A. Gotz, Briefing on Military Manpower, given to the RAND Graduate School Executive Seminar on the topic of military manpower, Santa Monica, Calif., July 16, 1997.



SOURCE: Office of the Assistant Secretary of Defense (Force Management Policy), *Population Representation in the Military Services*, Washington, D.C., 1996, Table D-13.

Figure 1.1—High-Quality Enlisted Accessions

answered by the force reductions of the past decade, the importance of the latter two issues has grown significantly during the DoD resource drawdown.

In addressing these issues, policymakers within the accessions environment have been urged to formulate incentives to attract quality individuals to serve the country. The argument posed to them is that, as the economic returns to higher levels of education increase in the private sector, policymakers will be required to increase (or even change) the types of incentives for attracting *high-quality* youth into the military. Likewise, high-quality, college-eligible youth may not join the military if they cannot receive the type of education, training, or experience (in the military) that will later make them competitive in the U.S. economy. Holding onto historic levels of quality (i.e., a high school education) as the academic baseline for accession requirements may pose a problem for the military.

Purpose and Methodology

The intent of this work is to provide background and contextual information for a comprehensive report that explores ways of recruiting college-eligible youth into the military: *Attracting College-Bound Youth into the Military: Toward the Development of New Recruiting Policy Options* (MR-984-OSD). This information is

presented as an inventory of those educational benefits and officer-commissioning programs available to servicemembers in the active-duty U.S. military at the time that report was prepared in 1998. Given the military's increased technological infrastructure over the past decade, along with the observation that high-quality enlisted accessions tend to stay longer in the service,[6] it is likely that the DoD will continue its policy to attract high-quality youth. In order to attract such individuals, who may otherwise choose school or nonmilitary occupations, it is probable that the military will be required to continue to offer benefits such as post–secondary education (during and/or after completion of service). It is also possible that the current educational-incentive structure may be inadequate to meet future demands of attracting and retaining high-quality servicemembers.

To better understand the current educational incentives available to servicemembers, I have organized this report around the following research questions:

- How do individuals join the military?
- What are the various commissioning sources and methods for becoming an officer in the U.S. military? Do these sources vary by service?
- How do servicemembers pursue training and post–secondary education (during and after their service obligation)?
- What resources are available to servicemembers to finance their post–secondary education (during and after their service obligation)?
- How do the services value post–secondary education relative to other promotion criteria?

To answer these questions, I collected information by several means: reading published directives and reports, interviewing personnel within the services, reviewing historical information, consulting with RAND colleagues, and doing research on the Internet.

---

[6]See Michael P. Ward and Hong W. Tan, *The Retention of High-Quality Personnel in the U.S. Armed Forces*, Santa Monica, Calif.: RAND, R-3117-MIL, February 1985, for more information on the topic of quality and retention. See Bruce Orvis et al., *Personnel Quality and the Performance of PATRIOT Air Defense System Operators*, Santa Monica, Calif.: RAND, R-3901-A, 1992, for a discussion on the link between productivity and accession quality.

Organization of the Report

This report is organized into six sections. Section 2 presents choices available to college-eligible youth. Included in this section are descriptions of ways that an individual can join the active-duty military and the types of recruiting going on today. Section 3 discusses officership in the U.S. military. As a group, officers make extensive use of educational benefits through both pre- and post-commissioning opportunities; therefore, it is necessary to understand the choices available to them. This section provides background information on how individuals become military officers, types of officer commissions, and descriptions of the primary sources of officer accessions. Section 4 provides a broader look at the ways in which both officers and enlisted can pursue post–secondary and post-graduate education. The focus of this section is primarily on methods of receiving non–military education while in service and currently available sources of financial assistance. Section 5 addresses the question of the value of post–secondary education within the military by examining the weight given to education in the promotion process. In Section 6, I briefly summarize the answers to the four central questions this report addresses (excluding how to join the military).

2. Contextual Information

College-eligible[1] youth face several choices when deciding on the military as an occupation: whether or not to join the military in the first place, whether to enlist or to become an officer, and which military service to choose. This section describes some of these choices.[2]

Ways to Join the Active-Duty Military

There are two ways that college-eligible youth can join the military: They can enlist or they can earn a commission and become an officer. Each way requires different levels of individual commitment, formal education, and training.

Officers have college educations, whereas almost all enlisted members are high school graduates. All services, with the exception of the Air Force, have a warrant-officer corps. Warrant officers are assigned greater responsibility than their enlisted counterparts. Figure 2.1 graphically summarizes educational levels of servicemembers in December 1996. It is apparent from this figure that virtually all (99 percent) of commissioned officers across the Department of Defense (DoD) have 4-year college degrees, compared with approximately 33 percent of warrant officers and 4 percent of enlisted servicemembers.[3]

Individuals who enlist do so in a similar fashion, regardless of service choice: They join the military through contact with military recruiters. Individuals who become officers have several ways to begin the process. For example, military recruiters may initially talk to prospective officer candidates, Reserve Officer Training Corps (ROTC) detachments may be involved in the process, or liaison officers[4] can facilitate the recruiting of candidates (see Section 3 for a detailed

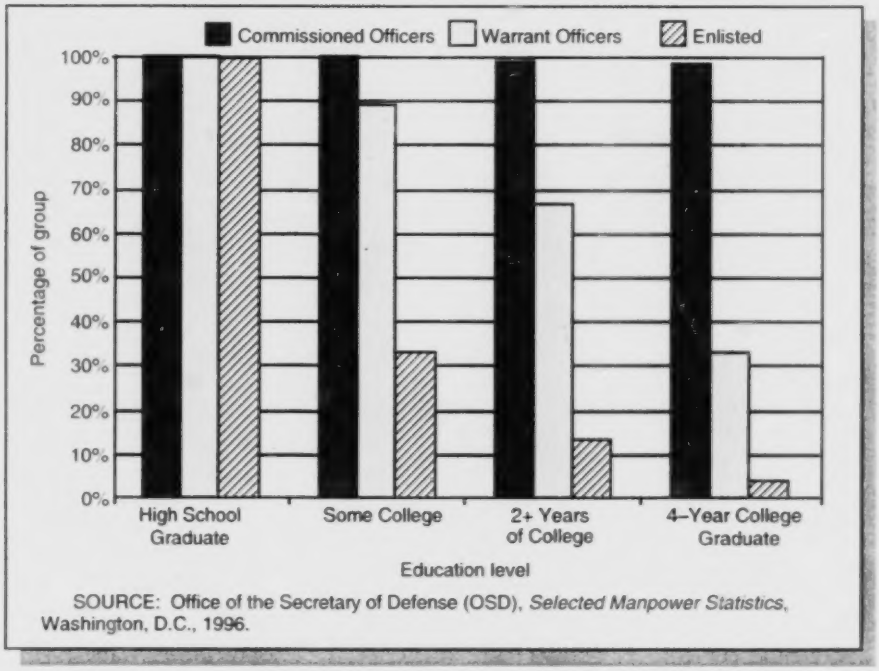
---

[1] In this context, *college-eligible* refers to individuals who have the aptitude and ability to choose college over other opportunities. This does not imply that an individual who enlists in the military is not necessarily college-bound but, rather, that that person may use the military as a means for gaining educational benefits, training, and experience.

[2] See the Appendix for a description and brief overview of the U.S. military, including a discussion of regular and reserve components, number of personnel, and the rank structure.

[3] Table 3.1 shows the relative percentage of officers, across all services, who have completed various educational levels.

[4] *Liaison officers* are commissioned officers who serve as a point of contact between the service academies and ROTC and prospective candidates (college and high school). Most liaison officers are members of the services' reserve components; they perform the duty to fulfill their reserve commitment.



SOURCE: Office of the Secretary of Defense (OSD), *Selected Manpower Statistics*, Washington, D.C., 1996.

Figure 2.1—Educational Levels of Military Personnel (CY96)

discussion).[5] Figure 2.2 describes the choices that an individual has in joining the military.

This figure presents a relatively simple model of the two choices, but it does not consider some of the specific ways in which individuals receive training or officer commissions, or the unique aspects of service that draw individuals into the military. For example, a person may decide to become an officer because of the opportunity for a specialized occupation such as flying jet aircraft, for a college education, or for choosing a profession. Reasons for choosing to enlist are similar to those for deciding to become an officer.[6] For both enlisted and officers, individuals have unique reasons for choosing a certain path.

Sections 3 and 4 describe more specific benefits available to servicemembers in exchange for joining the military. The Appendix describes the general

[5]The officer-candidate recruitment and qualifying process is much more complex than described here. For example, to receive an appointment to a federal service academy, an academy liaison officer is usually involved in interviewing and rating prospective candidates. Candidates are also required to complete a battery of physical-fitness tests, medical examinations, and interviews with civic and community leaders from the candidates' congressional district.

[6]Albert A. Robbert et al., "Career Retention Indicators: Interviews and Focus Groups," unpublished RAND research, presents more information on reasons given for joining the military.

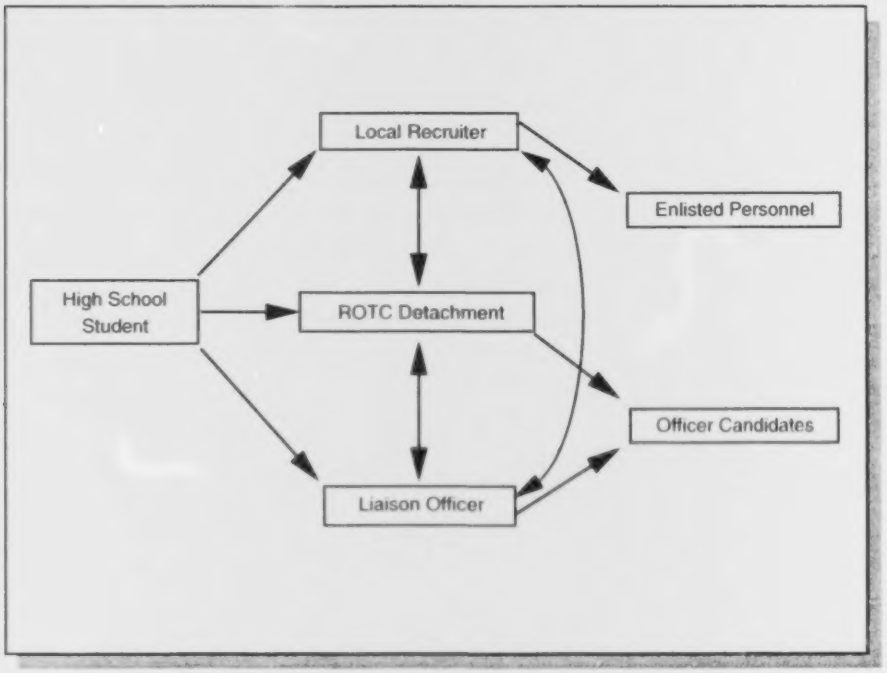


Figure 2.2—Choices Available to College-Eligible Youth

organization of the U.S. military as background for the reader to understand the number of personnel, the grade structure, and how the organization is broken down into both active and reserve components.

3. Commissioned Officers

Today, commissioned officers make up approximately 15 percent of all servicemembers within the Department of Defense. The remaining 85 percent of the military is composed of warrant officers and enlisted personnel. In most cases, officer candidates are accessed through one of three primary sources—the federal service academies, the Reserve Officer Training Corps, and Officer Training/Candidate School—or through direct appointment. Because the military must compete directly with corporate America for its officer candidates, it is important to understand the benefits and choice-set available to this group of individuals. This section provides background information on how individuals become military officers, types of officer commissions, and descriptions of the primary sources of officer accessions.

How to Become an Officer—the Necessity of a College Education

The reasons for becoming an officer range from dedication to country and protection of American ideals, interest in special or unique forms of employment, to simply getting a tuition-free college education at a prestigious university (in some cases). Similarly, there are multiple processes for officer commissioning (described in the next subsection). Regardless of commissioning method, a college education is considered to be a prerequisite for many officers today.[1] As evidenced by Table 3.1, roughly 98 percent of all officers in the military had at least a 4-year college degree in 1996. The highest educational attainment levels are seen in the Air Force, followed by the Army, the Navy, and the Marine Corps.

Although the current baseline educational requirement for officers is a 4-year college education, it has not been so throughout the past 50 years. In fact, as few as 55 percent of all U.S. military officers in the Korean War had received 4-year degrees. The number with college degrees was even less during World War II, World War I, and the Civil War. An emphasis upon a college education during the latter half of the twentieth century has been based primarily on two factors: (1) the belief that college-educated officers would make more-professional

[1] And in those cases in which individuals earned a commission without a 4-year degree, considered necessary for promotion to O-3.

Table 3.1

Education Levels of the Commissioned Officer Corps

Education Level[a]	Air Force	Army	Navy	Marine Corps
Greater than 4-year-college graduate	51%	39%	33%	17%
4-year-college graduate	100%	99%	95%	94%
Completed 2+ years of college	100%	100%	97%	97%
Completed some college	100%	100%	99%	98%
High school graduate	100%	100%	100%	100%

SOURCE: Data from Office of the Secretary of Defense, *Selected Manpower Statistics*, September 1996, p. 45, and *Population Representation in the Military Services*, November 1996, p. B-35.

[a]Percentages are rounded off to the nearest whole number.

servicemembers,[2] and (2) the larger pool of college-educated professionals for the military to choose from[3]—factors that have contributed to the increase in the proportion of college-educated military officers in Figure 3.1.

After the Korean War and through the 1960s and 1970s, the educational level of the officer corps rose dramatically, increasing by approximately 30 percent (16–17 percentage points) during the 1956–1966 decade and approximately 30 percentage points during the 1966–1976 decade. Not only were more college-educated individuals available for officer training and commissioning, but during the same time the military continued to procure and operate more-complex weapon systems, which required advanced capabilities and refined knowledge.[4] The P-51 Mustangs and B-29 Superfortresses that exemplified technology during the 1940s had, by 1970, been superseded by the services with much more-complex technology and weapon power such as nuclear weapons, jet aircraft, nuclear-powered carriers, and satellites. Complex technology required that officers be well-versed in science and engineering concepts. These trends appear to be on the same trajectory into the twenty-first century as well.

---

[2]For more insight on this subject, see William E. Simons, "The Service Academies and Higher Education," *U.S. Naval Institute Proceedings*, October 1961, pp. 41–50; Jesse C. Gatlin, "The Role of the Humanities in Educating the Professional Officer," *Air University Review*, Vol. 20, No. 1, pp. 21–26.

[3]Not to mention the large increase in degree requirements for civilian management jobs. The college degree is a way to screen for quality individuals as well as providing a certificate of more training.

[4]Contributing to the increase in academic standards have been progressive upgrades in officer sources: (1) During the Korean War, reserve officers (without 4-year degrees) were utilized; (2) during Korea and Vietnam, OCS was widely used as a commissioning source and college degrees were not needed to complete OCS, and (3) a paradigm shift during the 1950s within the Air Force specifically, which began to emphasize formal education versus skill as a prerequisite for flying aircraft.

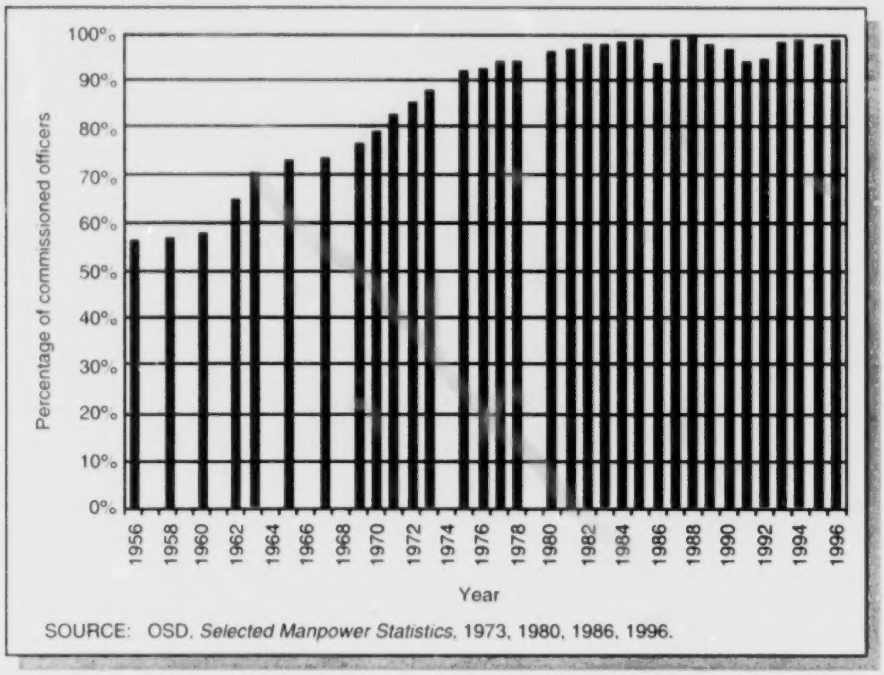


Figure 3.1—Percentage of Officers Possessing 4-Year-College Degrees

Types of Officers—Different Commissions and Different Components

In the strictest sense, an officer's commission is an appointment by the President of the United States that requires the officer to support and defend the Constitution of the United States. In a historical and contractual sense, the commission represents a commitment between the country and the individual to carry out military duties. Although every officer receives a commission upon entering the military, two distinctly different types of commissions are offered: (1) the regular commission and (2) the reserve commission.

A regular commission in the military requires that an officer serve exclusively on full-time active duty under the regular component of the officer's service. A reserve commission, on the other hand, allows an officer to serve on either full-time active duty or as a part-time servicemember of the service's reserve components.

Up until the fiscal-year 1992 (FY92) National Defense Authorization Act, all officers commissioned from service academies, top graduates from Officer

Training/Candidate Schools (OTS/OCS), and some distinguished graduates from the ROTC programs were offered regular commissions upon their appointment as military officers.

Passage of the act mandated that all officers commissioned after September 30, 1996, receive reserve rather than regular commissions. The new law provided that no officer could receive a regular commission until the individual had completed at least one year of active-duty service.

This marks a significant philosophical change in how the services view the process of earning a regular commission. Whereas academy graduates, top OCS/OTS graduates, and top performers from ROTC were awarded a regular commission prior to FY97, earning the commission is today based on performance while on active duty.[5]

During the history of the U.S. military, the distinction between *regular* and *reserve* commissions has been important. Prior to the drawdowns of the armed forces in the 1990s, regular officers had substantially more protection against reductions in force (RIFs), a much greater likelihood of being allowed to continue on active duty past their initial period of obligated service, and varying types of preferential treatment relative to officers with reserve commissions.[6] An example of the type of job security provided by the regular commission during the drawdown was observed by the fact that officers with reserve commissions were asked to leave the military before peers who had regular commissions. Table 3.2 summarizes the different components, types of commission, and the number of officers in each service in 1996.

Officer Accession Methods That Are Common to All Services

In general, the various officer-commissioning programs—primarily, the federal service academies, the Reserve Officer Training Corps, and the Officer Training/Candidate Schools—differ in mission, training duration, and history; however, most require candidates to obtain a college degree before or shortly

[5]Discussions with RAND colleague Susan Hosek have indicated that the services have different ways of using the process for awarding the regular commission. Essentially, the Marines use this policy to actively shape the size and structure of the pre-field grades, so that captains face a competitive selection process for a regular commission. The Navy has contemplated a similar competitive selection process. The Army has tended to provide the regular commission to newly promoted majors who had not previously received one. The Air Force holds central augmentation boards, similar to promotion boards, to select officers for regular appointments at approximately the 7-years-of-service point.

[6]Robert L. Goldich, *The DoD Service Academies: Issues for Congress*, Washington, D.C.: Congressional Research Service, February 6, 1997, p. 19.

Table 3.2

Service Components and Officer Commissions

Component Type	Number of Officers[a]	Regular Commission?	Reserve Commission?
Regular		Yes; career officers within services have regular commissions	Yes; however, officers compete for regular commissions at various career milestones, according to service policy.
• Air Force	76,388		
• Army	68,662		
• Navy	55,384		
• Marine Corps	16,034		
Active Total	216,468		
Reserve[b]		No	Yes; all officers within reserve components have reserve commissions
• Air National Guard	13,331		
• Air Force Reserve	26,956		
• Army National Guard	33,950		
• Army Reserve	98,674		
• Navy Reserve	41,717		
• Marine Corps Reserve	7,843		
Reserve Total	222,471		
Total Number of Officers[c]	438,939		

[a]Numbers do not include warrant officers.

[b]Reserve numbers do not include retired reserve officers.

[c]Data are from OSD, *Selected Manpower Statistics*, 1996, pp. 49, 211, 217.

after becoming officers. Direct appointment is also a commissioning option used by all the services.

Appointments to federal service academies are awarded primarily to high school seniors; some high school graduates also are accepted. Alternatively, a high school student may choose to attend a civilian university and enter the officer corps through either the Reserve Officer Training Corps program or through the Officer Candidate/Training School.[7] A direct appointment is usually reserved for officer candidates who enter the military service through either the health profession, the legal field, or religious schooling. Figure 3.2 shows the various avenues that can be taken to receive a commission.

A service-unique avenue in Figure 3.2 is the way enlisted personnel receive officer commissions. An accepted practice in the U.S. military is to commission enlisted personnel into the officer corps through various means. In war, the services have awarded battlefield commissions. During peacetime, the services

[7]The Air Force refers to its training as *OTS*; the other services refer to their programs as *OCS*. The training in both is similar in methodology and duration.

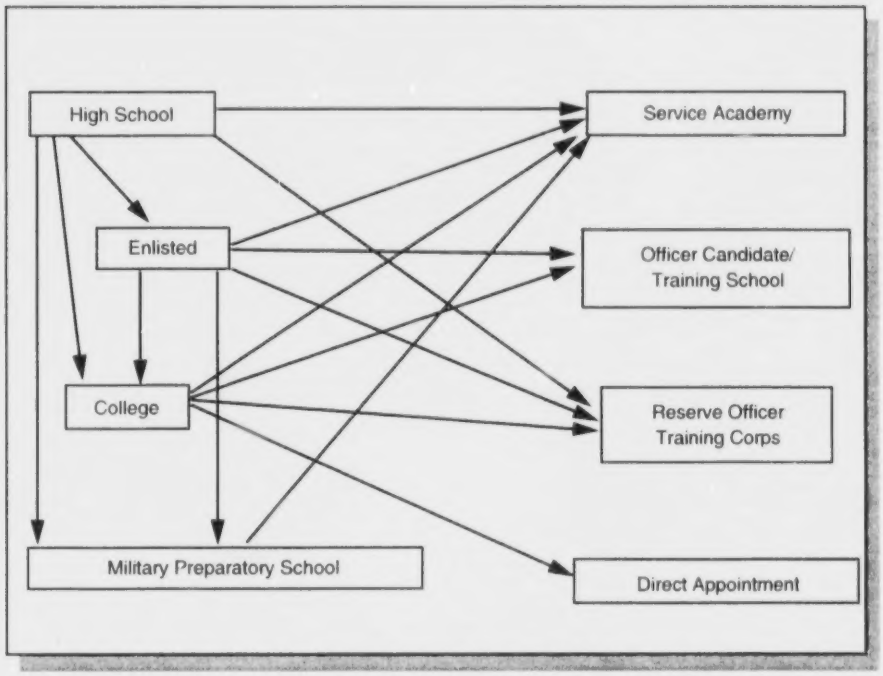


Figure 3.2—Typical Methods of Becoming an Officer in the Military

have different programs that allow commissioning by completing college and/or by applying directly to Officer Candidate School/Officer Training School. For example, the Air Force, Navy, and Marine Corps have programs that select highly qualified enlisted personnel and provide them with the opportunity to pursue their undergraduate education on a full-time basis prior to attending OCS/OTS. Another method for commissioning includes attendance at military academy preparatory schools, followed by admission to the service academies. In the following subsections, I describe each officer-commissioning method, including its mission, training duration, and history.

Service Academies[8]

Each military service, with the exception of the Marine Corps, has an academy dedicated to training officers for meeting its officer-accession requirements. Approximately 15 percent of each Naval Academy class opts to be commissioned

[8]For more information on the service academies and the history of the Reserve Officer Training Corps, see Michael R. Thirtle, *Air Force Officer Accessions: A Brief Review*, Santa Monica, Calif.: RAND, P-8001, July 1997.

in the Marine Corps; the remaining 85 percent chooses the Navy.[9] Each federal service academy provides a 4-year undergraduate degree of scholastic, military, and physical instruction at no cost to its students. Each student-body member at each academy receives approximately $600 in monthly pay to offset the cost of books and uniforms.[10] Congress controls the maximum strength for each academy, which is approximately 4,000 as a result of the FY92 Defense Authorization Act. Congress directed in the act that a 10-percent reduction in student-body size, from about 4,400 to a maximum of 4,000, be achieved by 1995. Each year, approximately 1,000 students graduate from each service academy.[11]

All of the service academies are authorized under Title 10 U.S. Code. Their Superintendents[12] report directly to the Chief of Staff Level (Vice Chief of Operations for the Naval Academy), which gives the academies the same organizational standing as any other major command or program area. Service academies operate as military hierarchies adapted to an academic environment, and each institution conducts academic, military, and physical training programs of its own devising.

Graduates of the academies are required to serve a total of eight years of military service (at least five years on active duty; the remainder may be spent in the reserves). Those cadets who do not complete the academy program may be required to serve active duty as an enlisted servicemember and/or pay back tuition and training costs to the federal government. Academy educations are currently valued at approximately $30,000 per year for payback purposes.[13]

The Reserve Officer Training Corps (ROTC)[14]

The Reserve Officer Training Corps can trace its lineage to the Land Grant Act of 1862, which required all colleges receiving land grants from the federal government to offer military training. The National Defense Act of 1916 established the ROTC program to supplement the academies and to provide officers for the reserve forces. The ROTC Vitalization Act of 1964 made the

---

[9]Based on FY95–96 data.

[10]Air Force Academy homepage, http://www.usafa.af.mil/, August 1997.

[11]Congress controls the maximum authorized strengths of the academies. Numbers have changed continuously over the years. The most recent changes took place during 1995, when the academies were directed by Congress to decrease maximum enrollments by 10 percent, to approximately 1,000 cadets per entering class.

[12]Refers to the chief administrator at each academy—analogous to the chancellor at a civilian-education university.

[13]Air Force Academy homepage, 1997. Table 3.4 provides more-specific information on the cost of the various accessions sources.

[14]See Charles Goldman et al., *Staffing Army ROTC at Colleges and Universities: Alternatives for Reducing the Use of Active-Duty Soldiers*, Santa Monica, Calif.: RAND, MR-992-A, 1998.

ROTC program voluntary for all colleges and universities. Today, more than 600 colleges and universities throughout the United States have ROTC programs, which makes ROTC the largest source of commissioned officers.

The regular college education is supplemented by military training and courses, which can vary from two to four years. Some ROTC participants receive scholarships for tuition and books. In addition, all ROTC enrollees receive a subsistence allowance.

The Assistant Secretary of Defense for Force Management Policy establishes the DoD policy and guidance for ROTC. As with the academies, the secretariat of each service is responsible for overseeing that service's program. The United States Air Force (USAF) program is managed by the Commandant, Air Force ROTC; the Army program, by the Commander, U.S. Army ROTC Cadet Command; and the Navy program, by the Chief of Naval Education and Training. Each service provides its ROTC with instructors, curriculum, and training.

The following paragraphs highlight the individual ROTC programs of each service.

Army ROTC. Students who satisfactorily complete the Army ROTC program and college requirements for a bachelor's degree qualify for a commission as a second lieutenant in the Army. Most universities that have Army ROTC offer a 4-year program. The program is divided into two courses, Basic and Advanced. The Basic Course coincides with the first two years of a 4-year academic program at a university. Students do not incur any military service obligation by enrolling in the Basic Course. Successful completion of this course is the prerequisite for the Advanced Course. The Advanced Course coincides with the final two academic years of a 4- or 5-year academic program at a university. Advanced Course students attend a 6-week summer training camp, normally during the summer between their third and fourth years, and they formally contract to pursue a commission in the Regular Army, Army Reserve, or Army National Guard. All Advanced Course students receive a monthly stipend of $150 during the school year and cadet pay while attending summer camp.

Merit-based financial assistance is offered to qualified students in the form of 4-, 3-, and 2-year scholarships through a national selection process. Selected cadets receive tuition assistance,[15] $450 per month for books and equipment, up to $400 per year for mandatory academic fees, and a $150-per-month stipend during the

[15]Depending on the state, some universities are able to offer scholarships that pay for 100 percent of all tuition and books.

school year. Students can apply for these scholarships during their junior and senior years in high school, as well as during the first or second year of college.

Navy ROTC. Students who enroll in a Navy ROTC (NROTC) unit, complete their required military courses, and obtain a bachelor's degree qualify for a commission as an ensign in the Navy or as a second lieutenant in the Marine Corps. There are three classes of enrollees: scholarship program, college program, and naval-science students. Students enter the Navy-Marine Scholarship Program through a national selection process conducted by the Navy and Marine Corps and qualify for active-duty commissions upon graduation. Benefits include tuition, all textbooks, fees, uniforms, and $150 per month. Scholarship students are required to complete a naval-science course each semester and to attend leadership laboratory one period each week for eight semesters. Three summer training periods, each lasting four to six weeks, are included in the program.

The Navy-Marine College Program is designed to qualify students for appointment as officers in the Naval or Marine Corps Reserve. Nominations are made by the Professor of Naval Science at the designated ROTC unit. Students in the program are provided uniforms and naval-science textbooks. During their third and fourth years, they receive a $150-per-month allowance. College Program students complete the same naval-science courses as the scholarship students and complete one summer training period during their last summer at the university.

Two-year forms of both the scholarship and college programs are available. A student applies during the spring term of the second year of college. If accepted, the student attends a 6-week summer Naval Science Institute and enrolls in the NROTC program at the beginning of his or her third academic year.

Finally, most universities offer an opportunity for students to take naval-science courses. Designated Naval-Science Students, enrollees are not Naval ROTC students; however, they may be considered for enrollment in one of the above programs upon request.

Air Force ROTC. College students can earn commissions as second lieutenants in the Air Force by enrolling in Air Force ROTC (AFROTC).[16] Two general types of Air Force ROTC can be pursued in college: the General Military Course (GMC) and the Professional Officer's Course (POC). In the GMC course of study, which is open to all students, the first two years of AFROTC introduce cadets to

[16]Details on the Air Force ROTC offerings can be found at the AF Enlisted Website, http://www.afoats.af.mil/Opportunities/Enlisted/af-enlisted.htm, April 1999.

professional aspects of the Air Force. Communications training, the environment of the Air Force officer, and the development of air power are some of the subjects covered. The first year of classes can be completed without any type of service obligation; the second year is obligated only for scholarship recipients. Classes generally meet for one hour per week, and there is a weekly 2-hour Leadership Laboratory. Air-science textbooks and uniforms are provided without cost.

The final two years, called the Professional Officer's Course (POC), which is analogous to the Army ROTC Advanced Course, is a continuation of the training started in the GMC. It covers leadership and management training and discussions on the role of air power in national defense. Each cadet holds a leadership position in the cadet corps for at least one semester. Cadets enrolled in these classes enter into a contractual agreement with the Air Force and are obligated (financially and for active-duty service) for the training and money they receive. All POC cadets receive a $150 monthly stipend and a $1,000-per-semester scholarship if they are not already on an AFROTC scholarship. Graduates serve four years on active duty.

Qualified students can apply for scholarships at any time from high school until the beginning of their third year in college. Scholarships are awarded to students who will fill needed requirements in the Air Force, especially engineering, mathematics, physics, and nursing. Scholarships pay for up to full tuition, textbooks, and fees and offer an allowance of $150 per month during the school year.

Comparison of ROTC Programs. Aside from the differences in the primary scholarship awards, the services have similar nonscholarship programs to pay for a student's books and uniforms, and to provide a nontaxable stipend while the student is enrolled. Table 3.3 summarizes the benefits of the services' ROTC programs as of FY97. It appears from this table that the only type of Navy and Marine Corps ROTC scholarship is one that pays for 100 percent regardless of where students attend. Air Force Type 1 scholarships are very similar in that they pay for full tuition as well; however, any scholarship less than a Type 1 may require that students pay out-of-pocket expenses, based on where they attend school. Prior to FY95, the Army did not have a Tier 1a program. That program was instituted because Army ROTC students were being required to spend a fair amount of their own money to finish their educations at such schools as Harvard, Duke, and Vanderbilt if the amount exceeded what the Army was willing to pay. In FY95, to remain more competitive with the other services, the Army implemented the Tier 1a program, which raised the maximum scholarship to $20,000 per year.

Table 3.3

ROTC Program Benefits

Category	Army	Navy/ Marine Corps	Air Force
Duration of scholarships	2–4 years	2–4 years	1–4 years[a]
Maximum level of scholarships	Tier 1a:[b] $20,000/year	Every scholarship is for full tuition	Type 1: full tuition and most fees
	Tier 1:[c] $12,800/year		Type 2: tuition and fees up to $9,000/ year for 4 years; allows increase up to 80 percent of tuition after freshman year
	Tier 2:[c] $9,000/year		
	Tier 3:[c] $5,000/year		
	Tier 4: $3,000/year for up to two years (junior and senior years)		Type 3: $2,000/year for up to two years as part of the Professional Officer's Course (junior and senior years)
Other scholarship benefits	All types of awards provide for books, most fees, and $1,500/year	All types of awards provide for books, most fees, and $1,500/year	All types of awards provide for books, most fees, and $1,500/year
Nonscholarship program	Provides uniforms, textbooks, and $150/month up to 20 months (junior and senior years)	Provides uniforms, textbooks, and $150/month up to 20 months (junior and senior years)	Provides uniforms, textbooks, and $150/month up to 20 months (junior and senior years)

[a]The 1-year scholarship is designed to meet production shortfalls in certain fields—currently, nursing and meteorological students in their junior year are eligible for this program.

[b]Tier 1a is only available at certain colleges and universities having higher-than-average tuition requirements. Examples of Tier 1a schools are Vanderbilt and Duke University. Generally speaking, the more generous scholarships are competitively awarded to students who are both (1) higher quality and (2) attending universities that have higher tuition.

[c]For limits on Types 1, 2, and 3 scholarships, see the AF Enlisted Website, http://www.afoats.af.mil/Opportunities/Enlisted/af-enlisted.htm.

Officer Candidate School/Officer Training School

Officer Candidate School originated during the period before the United States entered World War I. Today, OCS participants are generally college graduates; the Army and the Air Force require a 4-year college degree, the Navy and the Marine Corps allow some candidates to enter who do not have bachelor's degrees. The services use the OCS program for various purposes. Some

programs specifically prepare enlisted personnel to become commissioned officers;[17] others attract candidates to fill shortages in specialty areas. Although the services' individual OCS programs differ in the type of training that occurs, the duration (roughly 10–16 weeks) and ultimate goal of commissioning new second lieutenants or ensigns are the same. Of the three primary sources for commissioning officers, OCS is the most flexible for commissioning officers within short periods of time. This unique feature of OCS allows the services to rapidly increase or decrease officer production to meet service needs.

OCS is managed at different levels of the organization, depending on service. Army OCS is managed by the Army Infantry School at Ft. Benning, Georgia. USAF OTS is managed out of Maxwell AFB, Alabama.[18] USN OCS is under the command of the Naval Education and Training Center at Pensacola, Florida. The USMC Combat Development Command manages the Marine OCS program.

Another method of commissioning that is unique to Marine Corps officers is something of a hybrid between ROTC and OCS. It is entitled the Platoon Leaders Course (PLC). This program is open to full-time undergraduate students. Participants undergo training of either two 6-week sessions or one 10-week summer session. PLC participants may choose from ground, aviation, or legal training, and can apply for financial aid of up to $100 per month after completing one summer training session. After college graduation, PLC candidates are commissioned as second lieutenants and have a 4-year active-duty obligation.

Direct Appointments

Direct appointments to the regular officer corps are usually reserved for individuals who have achieved professional degrees in medical, legal, and religious fields. Most direct appointments enter the services at higher ranks than do their officer counterparts, who have been commissioned through either the academies, ROTC, or OCS/OTS. Advanced grade is based on a constructive credit computation. Advanced education and relevant civilian experience, along with service policy, determine what grade and time-in-grade are awarded to new-officer entrants. Entering rank depends upon the occupational specialty, educational background, prior experience, and the needs of the military. Law prescribing the grade and rank within grade for the original appointment as a commissioned officer is contained in 10 U.S.C., Section 533.

---

[17]The enlisted-to-officer commissioning programs are discussed in detail later in this section.

[18]Prior to 1959, the USAF also called its training OCS when the course was lengthened to 3 months. Besides a name change, the OTS program admitted only college graduates—something the OCS had not done.

All of the services require their direct appointments to attend a condensed training program, normally three to five weeks, that provides military orientation and indoctrination.

Comparison of the Accession Sources

As highlighted in this subsection, the accession sources provide the same output—officers—through different means. Whereas the academies require that cadets be immersed in a 24-hour-a-day, 4-year program of drill and instruction, the other programs require relatively less in the way of training. Congruent with this type of extra commitment, academy cadets earn their degrees and commissions through full-scholarship status and are paid $600 per month for textbooks, uniforms, and other academic expenses.

Academy graduates incur the longest commitment for active-duty time—five years compared with four years for the other sources—because of the higher cost of their education. However, all commissioning-source graduates are required to serve a total of eight years of obligated military service after their commissioning. This means that any difference of time not served in the active duty is served in the reserve.[19] For example, an academy graduate who leaves the active-duty service after 5 years is required to serve 3 years in the reserves to fulfill the 8-year commitment.

An interesting aspect of the commissioning-source comparison is cost per graduate. Direct-appointment sources require a 3-to-5-week course prior to commissioning; hence, expense incurred by the services for their accession is minimal.[20] The academy and ROTC cost more because of the more-intensive training environments. Academy graduates cost the services 8–10 times more than an OCS/OTS graduate and almost 4 times as much as an ROTC graduate who was on scholarship. (See Table 3.4.)

Figure 3.3 shows comparisons of the officer-accession sources from FY80 through FY96. It is apparent from this graphic that the service academies and ROTC have

---

[19]Within the reserve components, there are three categories (statuses) of service: the Ready Reserve, the Standby Reserve, and the Retired Reserve. The Ready Reserve is made up of individuals subject to order to active duty to augment active forces in time of national emergency. The Ready Reserve is composed of three subgroups: the Selected Reserve, the Individual Ready Reserve, and the Inactive National Guard. For more background information on the reserve, see Assistant Secretary of Defense for Reserve Affairs, *An Introduction to the Reserve Components of the United States*, Washington, D.C., February 21, 1995.

[20]However, a significant number of entering physicians were receiving large tuition and stipend benefits under the Health Professions Scholarship Program. Dentists and nurses are frequently paid an affiliation bonus (for example, the Air Force is currently offering $30,000 to dentists) as an inducement to access.

Table 3.4

Comparison of Accession Sources

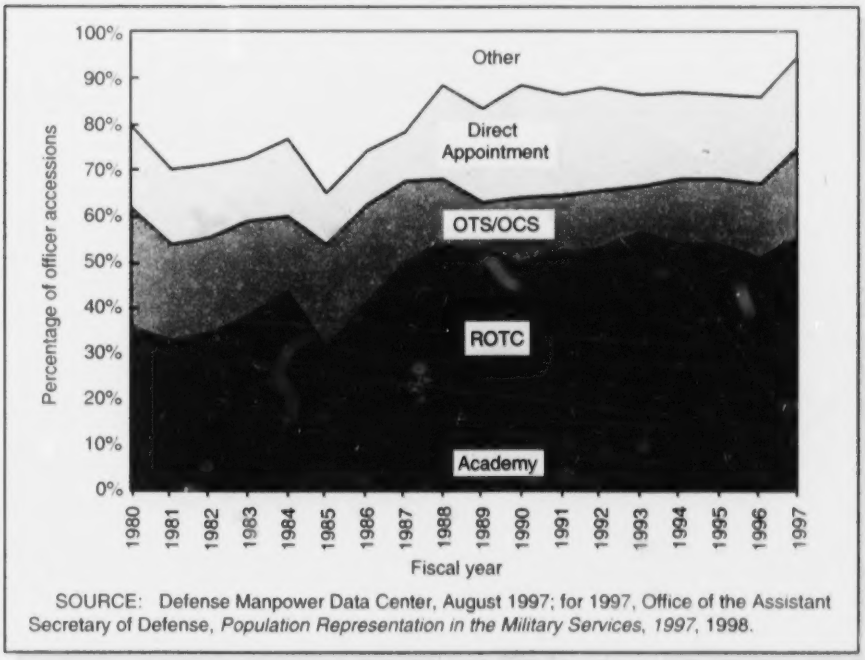
Category	ServiceAcademy	ROTC[a]	OCS/OTS[b]	Direct Appointment
Duration	4 years; full-time status	1–4 years, depending on scholarship; part-time status	10–16 weeks, full-time	3–5 weeks, full-time
Benefits	All educational expenses paid $600/month stipend Commission as an officer	Depend on scholarship type Commission as an officer	Paid training Commission as an officer	Paid training Commission as an officer
Service obligation	8 years total (at least 5 years' active duty)	8 years total (at least 4 years' active duty if scholarship; 2–3 years if nonscholarship)	8 years total (at least 4 years' active duty)	Depends on specific program
Rank upon graduation	Second Lieutenant/ Ensign (Navy)	Second Lieutenant/ Ensign (Navy)	Second Lieutenant/ Ensign (Navy)	Depends on occupational specialty, constructive credit computation; usually Second Lieutenant-Captain/ Ensign-Lieutenant (Navy)
Federal government cost per graduate[c]	$340,000	$86,000	$32,000	Less than OCS/OTS[d]

[a]See Table 3.3 for a summary of ROTC scholarship types.

[b]For purposes of this analysis, the Platoon Leaders Course could be considered similar to OCS/OTS.

[c]Cost per graduate of the commissioning programs is based on U.S. General Accounting Office (GAO), *Officer Commissioning Programs: More Oversight and Coordination Needed*, Washington, D.C.: GAO/NSIAD-93-97, November 1992, p. 24. Costs represent averages across the services and have been inflated to FY97 dollars by using a 4-percent-per-year rate of inflation from their FY90 base. Costs do not include subsidies by states or other institutions.

[d]In the case of physicians, the services have programs that pay for medical school—for example, the Health Professions Scholarship Program. Dentists and nurses are frequently paid an affiliation bonus as an inducement to access. The Air Force, for example, is currently offering $30,000 to dentists. The cost figures listed in this table include only direct-commissioning costs, not money spent on professional training prior to entering through the Direct Appointment program.



SOURCE: Defense Manpower Data Center, August 1997; for 1997, Office of the Assistant Secretary of Defense, *Population Representation in the Military Services, 1997*, 1998.

Figure 3.3—DoD Officer Accessions by Commissioning Source (FY80–FY97)

increased their share of the total officer accessions while OTS/OCS has decreased slightly. However, during the Vietnam War, just the opposite was true: OTS/OCS provided the bulk of officers because of the short lead time (approximately 90 days) to produce new lieutenants/ensigns.[21] This inherent flexibility in the production of officers is an advantage that OTS/OCS has over the longer-term sources, ROTC and the academies.

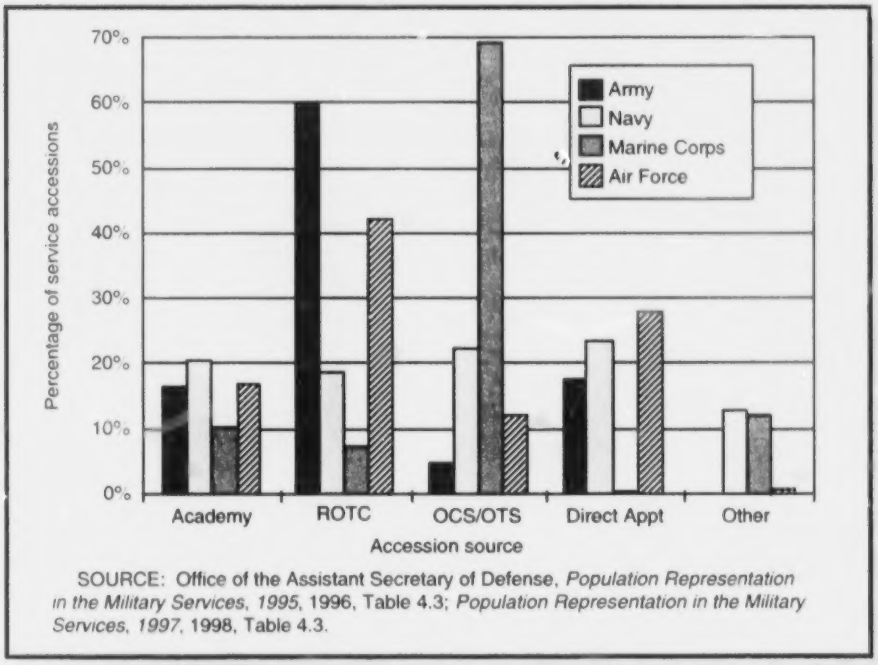
Except for such unique circumstances as World War II, the academies have required that all graduates have four years of military training and college education; the other commissioning sources have been more flexible on this requirement. From the statistics presented in Figure 3.4, we can see that the Marine Corps relies most heavily upon its OCS program, whereas the Army and Air Force use ROTC for the bulk of their officer accessions. The Navy has a more balanced program. As previously discussed, the Direct Appointment programs of the services currently provide such specialty-career officers as doctors, lawyers, and chaplains, who serve in a professional capacity. As evidenced by the data, the direct-appointment source provides approximately 25

[21] Although OTS *training* is approximately 90 days, the lead time to procure and train an officer through OTS is probably closer to 180 days, since applicants must be solicited, selection boards convened, orders produced, etc.

percent of all Air Force and Navy officers. The "other" category in Figures 3.3 and 3.4 includes officers who are trained in one service and accessed into another (primarily the Marine Corps).[22]

Academy Preparatory Schools

Academy preparatory schools (also known as "prep schools") were originally created to prepare enlisted personnel for entrance into the service academies. Since the 1990s, they have annually produced approximately 100–200 qualified candidates for entrance into the academies.[23] The Army and the Navy were the first services to use the prep-school concept (World War I) as a process whereby enlisted servicemembers could gain entrance to West Point and Annapolis,



SOURCE: Office of the Assistant Secretary of Defense, *Population Representation in the Military Services, 1995*, 1996, Table 4.3; *Population Representation in the Military Services, 1997*, 1998, Table 4.3.

Figure 3.4—Sources of Commission for Active-Duty Officers (FY97)

[22]OSD, *Population Representation in the Military Services*, Washington, D.C., November 1996, p. 4-6.

[23]See the following report for more information on the prep schools: GAO, *DoD Service Academies: Academy Preparatory Schools Need a Clearer Mission and Better Oversight*, Washington, D.C.: GAO/NSIAD-92-57, March 1992; GAO, *Academy Preparatory Schools*, Washington, D.C.: GAO/NSIAD-94-56R, 1994.

respectively. Today, the Army, Navy, Air Force, and Coast Guard have separate preparatory schools whose primary mission is to prepare students for entrance to the academies. Unlike the service academies, the prep schools were not created by federal legislation. Although the schools still admit enlisted personnel, the prep schools now serve mainly to aid minority and athletic recruits in developing their academic, physical, and leadership skills.[24] The program lasts 10 months and combines a mix of academics, physical fitness, and military customs and courtesies—skills similar to those required for successful completion of the academy program of study.

Civilians do not apply directly to attend a prep school. Rather, students are selected from the pool of service-academy applicants who do not receive appointments. To attend the prep schools, civilians enlist in the reserves at the lowest enlisted rank and are paid accordingly. By enlisting in the reserves, civilians technically incur a service obligation, but the obligation is generally waived for civilians who do not complete the prep-school course of study or who do not receive an academy appointment. The prep schools do not charge tuition. The services reassign to the prep school those attendees who enter directly from enlisted service and continue to pay them at the grade they earned before enrolling. Unlike cadets at the academies, prep-school students are considered for promotion within the same time frame as other enlisted personnel.

Unique Forms of Earning a Commission Within the Services

Whereas the preceding subsection discussed commissioning sources that are common across the Department of Defense, this subsection describes pre-commissioning programs that are unique to the Air Force, the Marine Corps, the Army, and the Navy. The previously discussed commissioning sources serve as the main processes for training new officers. What differs are the preliminary steps leading to the commissioning programs themselves. Many of the avenues enable enlisted servicemembers to earn a college education prior to completing ROTC or OTS/OCS. Others are preliminary programs that officer candidates may be required to complete prior to their commissioning. To facilitate the discussion of the various pre-commissioning programs, I present charts similar in design to Figure 3.2.

[24]GAO, 1992, p. 6.

Air Force

As with the other services, the Air Force uses the above-described four commissioning processes as the primary means of acquiring its officers. The Air Force also has five unique programs available for enlisted personnel to gain commissions: the Airman Education and Commissioning Program (AECP), Bootstrap, the Airman Scholarship and Commissioning Program (ASCP), Scholarships for Outstanding Airman to ROTC (SOAR), and the Professional Officer Course–Early Release Program (POC-ERP). The programs involve different types of compensation and benefits, and they require that enlisted personnel pursue their commission through either ROTC or OTS (see Figure 3.5). These programs are described in greater detail below.

The Airman Education and Commissioning Program. The AECP is administered by the Air Force Institute of Technology (AFIT) at Wright-Patterson Air Force Base (AFB), Ohio. AFIT selects the educational institution and college majors that tend to be in high-demand fields such as nursing, engineering, and meteorology. Individuals selected for this program are expected to choose a major field of study that fits the needs of the Air Force. Enlisted airmen who have acquired at least 45 semester-hours of college credit may compete for

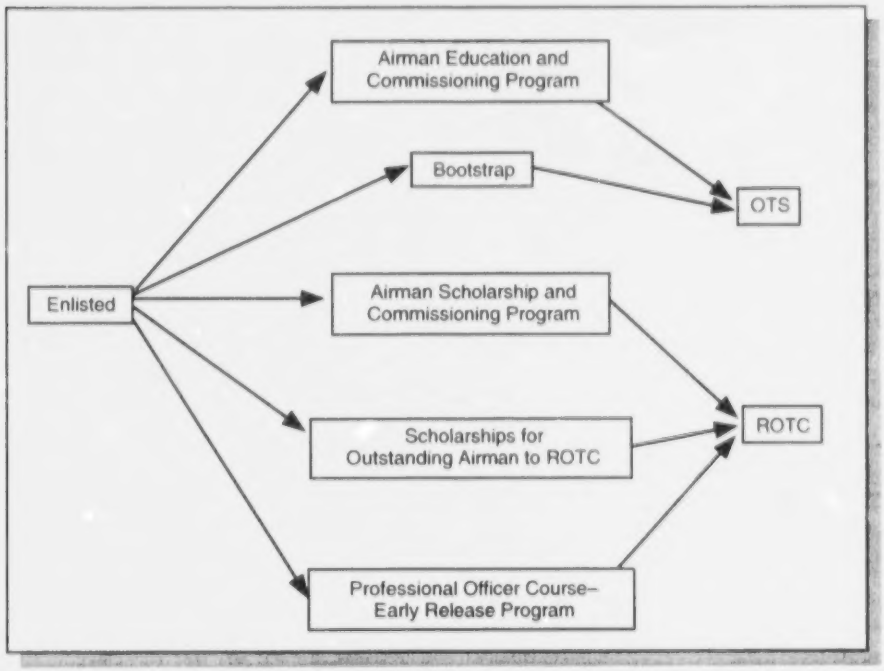


Figure 3.5—Enlisted Commissioning Opportunities Unique to the Air Force

selection to attend a civilian college full-time and obtain a bachelor's degree. AECP participants are paid as E-5s while in school. In FY97, 35 people were selected for this program.[25]

Upon completion of the educational phase of the program, airmen are assigned to OTS for their military training and commissioning. Students are promoted to grade E-5 during training and receive full pay plus tuition and book allowances.

Bootstrap. Bootstrap is a permissive temporary duty assignment (TDY)[26] that provides enlisted personnel with the opportunity to complete a bachelor's degree. Approval of Bootstrap TDY is contingent upon the ability of the servicemember's organization to release the individual from normal duties for the requested period of time. Individuals are not eligible to use Air Force tuition assistance while on a Bootstrap TDY. The candidate must be able to complete the remaining course requirements by full-time resident study within a period of one year or less. Upon completion of the degree, individuals can (but are not required to) attend OTS for commissioning as an officer in the USAF (this program is referred to as "terminal" Bootstrap).

Airman Scholarship and Commissioning Program. ASCP is another way for enlisted personnel to finish their education and earn a commission. As of FY97, only Type 2 ROTC scholarships are available to enlisted personnel accepted for this program (see Table 3.3 for specific benefit information on Type 2 scholarships), for two, three, or four years. Individuals chosen for this program are discharged from active duty and enlisted in the Air Force Reserve. Upon completion of all degree requirements, these airmen are commissioned as Air Force second lieutenants. Like the Type 2 scholarships for non–prior-enlisted personnel, the ASCP scholarship includes tuition and lab fees, textbooks, uniforms, and a monthly subsistence allowance. In FY97, 85 airmen were selected for this program.[27]

Scholarships for Outstanding Airman to ROTC. Similar to ASCP, SOAR pays enlisted personnel who have been nominated by Air Force commanders because of their competitive academic and work backgrounds, to earn their college degrees and officer commission as part of the ROTC. Participants in the program must separate from active duty to accept the scholarship and enroll in AFROTC.

---

[25] "Air Force Streamlines Commissioning Process," *Air Force News Service*, December 13, 1996.

[26] *Permissive TDY* is an official Air Force term that describes temporary-duty costs (lodging, air travel, per diem) for which the Air Force does not compensate the servicemember. Other uses of permissive TDY in the USAF include such activities as house-hunting for a change of station and attending nonsponsored USAF academic conferences.

[27] "Airman Scholarship and Commissioning Program," *Airman Magazine*, May 1996.

Type 1 ROTC scholarships are available to all individuals accepted into the program. In FY97, 48 peopled were selected for this program.[28]

Professional Officer Course–Early Release Program. The POC-ERP allows an airman with no more than two years of college remaining to apply for early release from active duty to pursue a commission through AFROTC. At the end of the college program and after successfully completing ROTC, the airman is commissioned as an officer in the Air Force. POC-ERP members are eligible for the Professional Officer Course Incentive Scholarship if they meet scholarship age requirements and have a grade-point average of at least 2.35. As with the normal 2-year ROTC POC benefit, POC-ERP members are paid $2,000 per year toward tuition and textbooks. In FY97, 83 airmen were selected for this program.[29]

Marine Corps

Besides choosing to attend the Naval Academy Prep School, enlisted Marines have opportunities for gaining their commissions through the following four programs: the Broadened Opportunity for Officer Selection and Training (BOOST) program, the Marine Corps Enlisted Commissioning Education Program (MECEP), the Meritorious Commissioning Program (MCP), and the Enlisted Commissioning Program (ECP). Figure 3.6 shows the relationships between the pre-commissioning programs and the Naval Academy, Navy ROTC, and OCS.

Broadened Opportunity for Officer Selection and Training. The BOOST Program provides an opportunity for certain Marines to compete for selection to the Marine Corps Enlisted Commissioning Education Program, the U.S. Naval Academy, or the Naval Reserve Officer Training Corps. The program provides year-long preparation, at Newport, Rhode Island, for entrance to these programs and focuses specifically on math, science, and English. Although conducted at the same location as the Naval Academy Preparatory School, the program is different in that BOOST "provides an educational-enhancement opportunity for all Marine enlisted personnel from educationally deprived or culturally differentiated backgrounds, regardless of race, color, sex, religion, or national

---

[28] "Airmen Can Now 'SOAR'," *Air Force News Service*, February 1997.

[29] "Air Force ROTC Professional Officer Course–Early Release Program," *Airman Magazine*, May 1996.

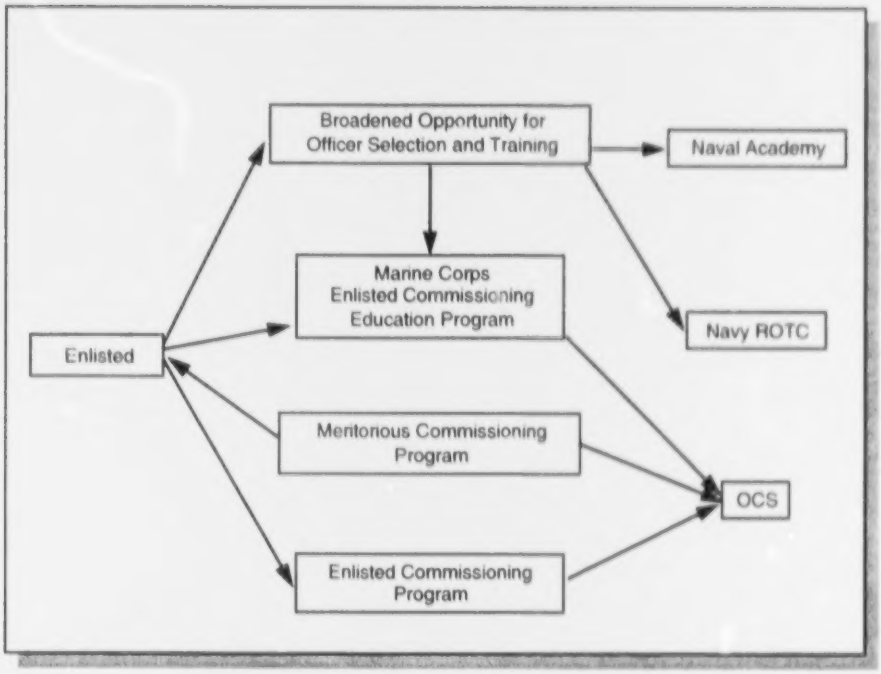


Figure 3.6—Enlisted Commissioning Opportunities Unique to the Marine Corps

origin, that can improve their chances for qualifying for a commissioning program."[30] In FY96, 65 Marines were selected for the BOOST Program.[31]

Marine Corps Enlisted Commissioning Education Program. The MECEP provides selected enlisted Marines with the opportunity to earn a bachelor's degree by attending a college or university as full-time students. Individuals are selected through a competitive process, which considers aptitude for officer commissioning, test scores, and job performance. While in school, Marines continue to receive their full pay and allowances. However, participants must pay their own tuition, books, and other academic fees. After their first year in the MECEP, Marines may attend OCS at Quantico, Virginia. In FY96, approximately 150 Marines were chosen to participate in this program;[32] this number decreased to approximately 120 in FY97.[33]

---

[30]U.S. Marine Corps, *FY97 Broadened Opportunity for Officer Selection and Training (BOOST) Program*, Washington, D.C.: ALMAR 269/96, July 23, 1996.

[31]U.S. Marine Corps, *FY96 Broadened Opportunity for Officer Selection and Training (BOOST) Program*, Washington, D.C.: ALMAR 119/96, March 22, 1996.

[32]U.S. Marine Corps, *FY96 Marine Enlisted Commissioning Education Program (MECEP) Selection*, Washington, D.C.: ALMAR 113/96, March 22, 1996.

[33]U.S. Marine Corps, *FY97 Marine Enlisted Commissioning Education Program (MECEP) Selection*, Washington, D.C.: ALMAR 082/97, March 14, 1997.

Meritorious Commissioning Program. MCP allows Marine Corps commanding officers to nominate qualified enlisted Marines for assignment to OCS to earn their commission as officers. To be eligible for MCP, Marines must have earned an associate's degree or have completed two years of college. Upon commissioning after OCS, the Marine is expected to continue to pursue a bachelor's degree to be competitive for future augmentation (earning a regular commission) and promotion within the officer corps. In FY96, three separate MCP selection boards were held. From these boards, approximately 50 Marines were selected for the program.[34]

Enlisted Commissioning Program. ECP is a program that allows qualified enlisted Marines to receive an officer's commission through OCS. To be eligible for ECP, Marines must have already earned a bachelor's degree. As with the MCP, in FY96, three separate selection boards were held to determine who would attend ECP. The selection boards chose approximately 75 people to attend OCS through ECP.[35]

Army

The Army has a single unique method, referred to as the "Green-to-Gold" Program, that allows enlisted servicemembers to gain a commission in the U.S. Army. Under this program, enlisted servicemembers who are considered to have officer potential and who have served at least two years on active duty are allowed to voluntarily request discharge from active duty, to enroll in Army ROTC to earn a bachelor's degree, and to earn a commission as an Army officer. This program is similar in intent and purpose to the Air Force's POC-ERP program. ROTC scholarships may be awarded for either two, three, or four years, depending on the number of years the servicemember will need to finish his or her degree and are similar to the amounts described in Table 3.3.[36]

Navy

The Navy has three programs that are similar in both scope and duration to the Marine Corps' programs: the Enlisted Commissioning Program (ECP), the

---

[34]U.S. Marine Corps, *FY96 Meritorious Commissioning Program Selection*. Washington, D.C.: ALMAR 148/96, April 12, 1996; ALMAR 301/96, August 20, 1996; ALMAR 413/96, November 22, 1996.

[35]U.S. Marine Corps, *FY96 Meritorious Commissioning Program Selection*. Washington, D.C.: ALMAR 148/96, April 12, 1996; ALMAR 301/96, August 20, 1996; ALMAR 413/96, November 22, 1996.

[36]U.S. Army Training and Doctrine Command (TRADOC) homepage, http://www.tradoc.army.mil/rotc/gg.html/, October 1997.

Seaman-to-Admiral Program, and the Broadened Opportunity for Officer Selection and Training (BOOST) program. Figure 3.7 shows the opportunities whereby an enlisted naval servicemember can gain a commission.

Enlisted Commissioning Program. The Navy ECP enables servicemembers with previous college credits to complete requirements for a bachelor's degree and earn a Naval Officer commission while receiving full active-duty pay and allowances. The length of the ECP varies with the type of major the individual chooses. For technical degrees, the enlistee has 36 months to complete all college requirements; for nontechnical degree programs, the enlistee has no longer than 30 months. Study must occur at a school that has Navy ROTC, even though candidates are commissioned through OCS.

Seaman-to-Admiral Program. The Seaman-to-Admiral Program is applicable to enlisted personnel of the U.S. Navy who are at least E-5s in rank. They are selected for the program based upon their scores on officer-aptitude exams, job performance, and recommendations from their supervisors. Selectees for the program are appointed as ensigns in the Navy after completing OCS in Pensacola, Florida. Following commissioning from OCS, officers are assigned to

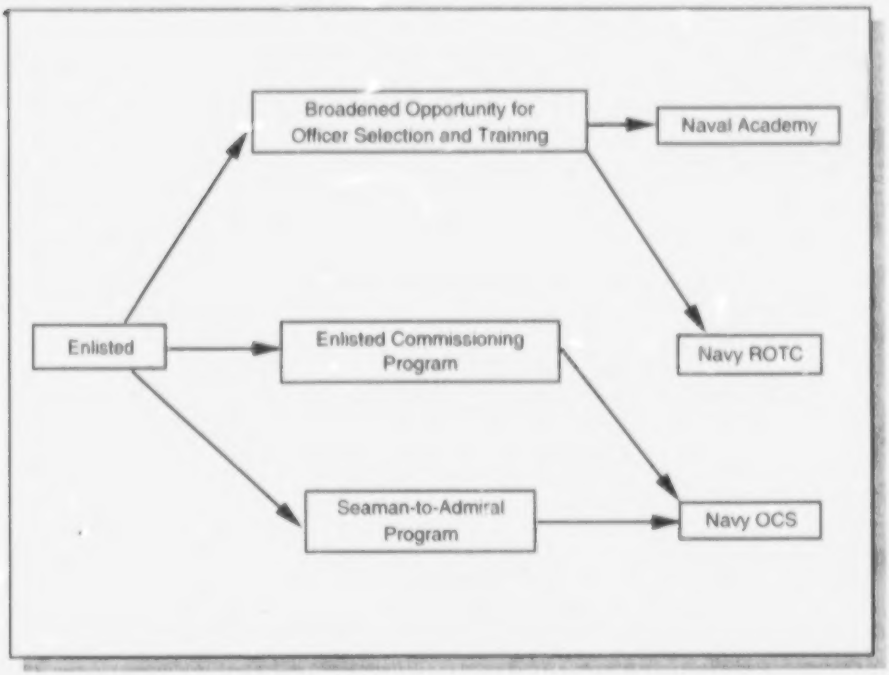


Figure 3.7—Enlisted Commissioning Opportunities Unique to the Navy

active-duty positions. Upon completion of initial sea duty and warfare qualification, officers are then screened for selection to a bachelor's degree program at the Naval Postgraduate School in Monterey, Calif. In FY97, 50 people were chosen to participate in the program.[37]

Broadened Opportunity for Officer Selection and Training. The Navy BOOST Program is conducted at the same location as the Marine Corps BOOST Program. The Navy BOOST Program has the same type of focus as the Marine BOOST Program, and Navy enlisted take the same courses as Marine Corps participants. The BOOST Program was initially implemented in 1969 as an "affirmative action program."[38] To date, it has aided 11,000 Naval and Marine officers in earning their commissions. It is expected that, upon completion of the BOOST Program, the graduates will receive NROTC scholarships or attend the Naval Academy. In 1996, there were 192 graduates (Marines and Navy servicemembers) of the BOOST Program.[39]

Comparison of the Unique Commissioning Programs

It is apparent from the above discussion that there are several ways for an enlisted servicemember to earn a commission as an officer. Although the outcome is the same for each program (i.e., gaining a commission), the processes tend to be different in duration and types of benefits. It appears that the services have attempted to develop programs that fit the needs and varied circumstances of enlisted personnel.

The Air Force has by far the most options available, and most mirror the ROTC structure. However, this is not to imply that many programs equate to many opportunities being available. This fact is evidenced by the small number of individuals who are able to use these avenues for commissioning relative to other "traditional" means.[40] The Marine Corps has the MCP, but it does not provide educational benefits; rather, it sends the enlisted Marine straight from active duty to OCS with the anticipation that educational benefits (college degree program) will follow after completion of the first duty assignment as a second lieutenant. MECEP, like the Navy ECP and the USAF Bootstrap Programs,

---

[37]U.S. Navy, *Selection of Applicants for the Seaman to Admiral Commissioning Program*, Washington, D.C., NAVADMIN 232/97, September 26, 1997.

[38]U.S. Navy Education and Training Center homepage, http://www.cnet.navy.mil/newport/news35.htm, October 1997.

[39]U.S. Navy Education and Training Center homepage, http://www.cnet.navy.mil/newport/news35.htm, October 1997.

[40]*Traditional* in this sense refers to individuals who go directly to college from high school and enter the Academy or ROTC, or attend OCS after graduating from college.

allows enlisted servicemembers to attend college at their current rank, but requires that participants pay their own tuition and school costs. The BOOST Program is similar to an academy preparatory school in the sense that it prepares Marine Corps and Navy enlisted personnel for either ROTC or Annapolis; but, historically, its objective has been different—to support affirmative action. The Army has its "Green-to-Gold" Program, which allows enlisted servicemembers into the Army ROTC program to finish their bachelor's degree and earn a commission. Table 3.5 summarizes the educational benefits, program duration, other benefits, and commissioning sources for the various programs.

Table 3.5

Unique Enlisted-to-Officer Commissioning Programs

Program	Education Benefits	Duration of Program	Other Benefits	Commissioning Source
		Air Force		
AECP	Full tuition	1–4 years, full-time	Promoted to E-5 and given full pay while in school	OTS
Bootstrap	Must pay own tuition	Must last for less than 1 year	Full pay at current rank	OTS
ASCP	Type 2 ROTC scholarship	1–4 years	ROTC benefits	ROTC
SOAR	Type 1 ROTC scholarship	1–4 years	ROTC benefits	ROTC
POC-ERP	Type 3 ROTC scholarship	2 years	ROTC benefits	ROTC
Medical Service Corps	On active duty for Commissioned Officer Training phase of OTS	3–5 weeks		Direct appointment
		Marine Corps		
BOOST	Prep are for ROTC, MECEP, or academy	1 year	Paid training	Naval Academy, ROTC, or through OCS via MECEP
MECEP	Must pay own tuition	1–4 years, full-time	Full pay at current rank	OCS
MCP	None	16 weeks	Paid training	OCS
		Army		
Green-to-Gold	ROTC Scholarship	2–4 years	ROTC benefits	ROTC
		Navy		
BOOST	Prep are for ROTC or academy	1 year	Paid training	Naval Academy or ROTC
Seaman-to-Admiral	Eventually will attend a 4-year-degree program at the Naval Postgraduate School	10 weeks	Paid training; eventual follow-on 4-year-degree program after OCS	OCS
ECP	Must pay own tuition	1–3 years	Full pay at current rank	OCS

4. Methods and Financing of Voluntary Post–Secondary Education

Besides the many commissioning programs described in Section 3, several other educational benefits are available to enable both officers and enlisted personnel to take secondary, post-secondary, and post-graduate courses. In this section, I (1) describe the overarching Department of Defense policy on the subject of voluntary education, (2) list the various forms of education available across all services, and (3) discuss the financial benefits for servicemembers.

Current Department of Defense Policy

The DoD Voluntary Education Program offers off-duty civilian high school, vocational-technical, undergraduate, and graduate educational opportunities to U.S. military personnel worldwide. These services are provided through the respective military services and their local education centers at the base level. The Assistant Secretary of Defense for Force Management Policy, under the Under Secretary of Defense for Personnel and Readiness, provides overall policy guidelines for Voluntary Education Programs in the Department of Defense. Two DoD documents that provide overall policy guidance for the Voluntary Education Program are DoD Directive 1322.8[1] and DoD Instruction 1322.25.[2] Details of these documents are presented in the following subsections.

DoD Directive 1322.8

DoD Directive 1322.8, released on January 6, 1997, provides policy guidance for Voluntary Education Programs within the Department of Defense for the following areas: adult education, distance education, tuition assistance, and the Defense Activity for Non-Traditional Education Support (DANTES) program. Here, *adult education* includes instruction below the college level for adults who lack sufficient mastery of basic educational skills (English, reading, writing, speaking, mathematics) to enable them to function effectively in the military.

---

[1]Assistant Secretary of Defense for Force Management Policy, *Voluntary Education Programs for Military Personnel*, Washington, D.C.: DoD Instruction 1322.8, January 6, 1997.

[2]Assistant Secretary of Defense for Force Management Policy, *Voluntary Education Programs*, Washington, D.C.: DoD Instruction 1322.25, February 5, 1997.

Distance education is the delivery of education or training through electronically mediated instruction, including satellite, video, audiographic, computer, multimedia technology, and other forms of learning at a distance, such as correspondence and independent study. *Tuition assistance* pays a percentage of the tuition charges of an active-duty member enrolled in courses of study during his or her off-duty time.

It is expected that the amount of monetary support available to each servicemember is uniform across the military services. In this regard, USD (P&R) has mandated to the services that programs be established and maintained within the Department of Defense that provide servicemembers with off-duty, voluntary, educational opportunities. Voluntary Education Programs are expected to provide educational opportunities comparable to those available to citizens outside the military, to be available to all active-duty personnel regardless of their duty location, and to include courses and services provided by accredited post–secondary vocational and technical schools, colleges, and universities. Programs may be provided as traditional classroom instruction or through distance education.[3]

DoD Instruction 1322.25

Related to DoD Directive 1322.8, DoD Instruction 1322.25 implements policy, assigns responsibilities, and prescribes procedures for the operation of Voluntary Education Programs in the Department of Defense. Similar to the DoD Directive, this Instruction directs that members of the armed forces serving on active duty shall be afforded the opportunity to complete their high school education, earn an equivalency diploma, improve their academic skills or level of literacy, enroll in vocational and technical schools, receive college credit for military training and experience in accordance with the American Council on Education's (ACE) *Guide to the Evaluation of Nontraditional Learning Experiences in the Armed Forces*, take tests to earn college credit, and enroll in post–secondary education programs that lead to associate's, bachelor's, and graduate degrees.

Likewise, the Instruction provides that servicemembers' costs to participate in Voluntary Education Programs shall be reduced through financial support, including tuition assistance, which is administered uniformly across the services. It also emphasizes that information and counseling about Voluntary Education Programs shall be readily available and easy to access so that servicemembers are

---

[3]DoD Voluntary Education homepage, http://voled.doded.mil/dod_docs/dod1322.8.htm, June 1997.

encouraged to make maximum use of those educational opportunities that are available.[4]

Enlisted Voluntary Educational Opportunities

Educational opportunities within the DoD are divided into two general classes: those for enlisted members and those for officers. Enlisted educational programs include high school diploma programs, associate's degree programs, and the opportunity for finishing undergraduate and graduate work. These programs are separate and supplemental to those mentioned in the subsection of Section 3 describing the programs whereby enlisted servicemembers can earn officer commissions. This subsection describes the various Voluntary Education Programs for enlisted personnel. The next subsection addresses opportunities for officers, many of which focus on graduate work. Unless specifically highlighted, the programs apply to all services. In some cases, the same financing methods are used (for example, tuition assistance).

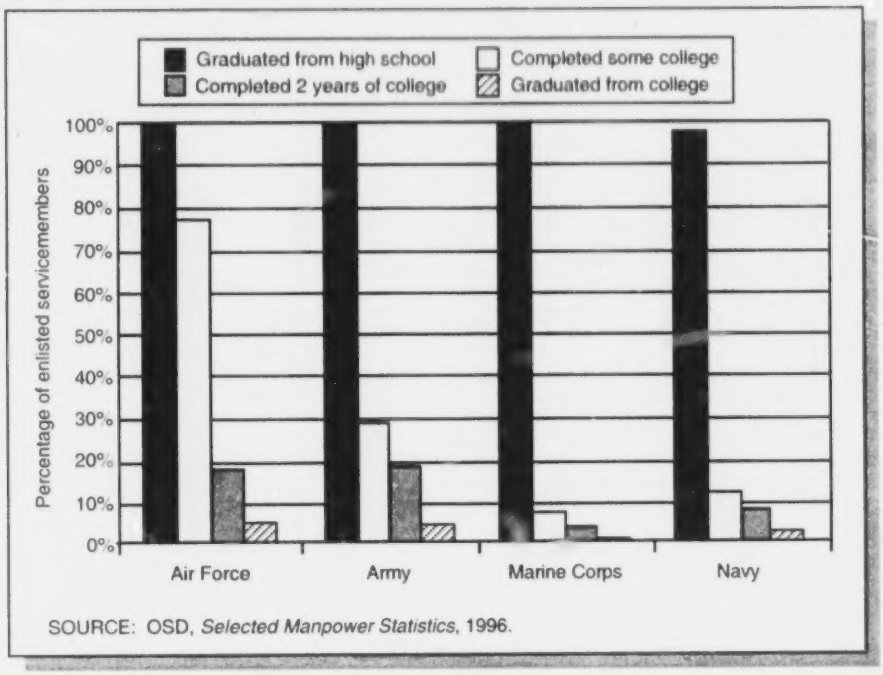
Active-Duty Enlisted Educational Levels Across the Services

Whereas most commissioned officers tend to have college degrees, enlisted personnel usually have a high school education. In fact, many have attained some level of college education. Figure 4.1 summarizes the levels of educational attainment, by service, of the enlisted corps. These data do not include information on warrant officers, which would tend to raise the overall averages. It is apparent from this chart that the Air Force and the Army tend to have the most-educated enlisted corps among the services. Approximately 77 percent of Air Force and 29 percent of Army enlisted servicemembers have some college experience, whereas only 5 percent and 4 percent, respectively, have earned a college degree.[5]

For the most part, DoD Voluntary Education Programs are intended to provide increased educational benefits in order to raise standards within the military. As a positive externality to the individual, they also increase general skill levels and help facilitate re-entry into civilian life after separation from the military. As evidenced by Figure 4.2, the educational level of the enlisted corps has increased

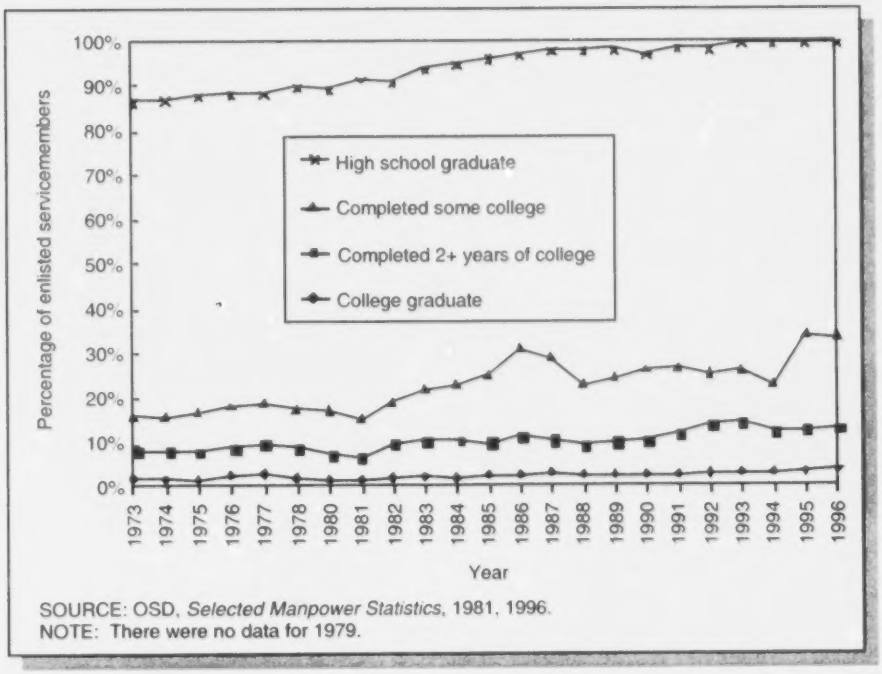
[4]DoD Voluntary Education homepage, http://voled.doded.mil/dod_docs/dod1322.25.htm, June 1997.

[5]Data in this subsection have been adapted from OSD, *Selected Manpower Statistics*, 1980, p. 109; 1985, p. 81; 1990, p. 101; and 1996, pp. 45, 93. It is important to keep in mind that these data include information from across all enlisted grades and are greatly influenced by recent accessions and the population of first-term enlistees.



SOURCE: OSD, *Selected Manpower Statistics*, 1996.

Figure 4.1—Educational Level of Enlisted Servicemembers



SOURCE: OSD, *Selected Manpower Statistics*, 1981, 1996.
NOTE: There were no data for 1979.

Figure 4.2—Historical Charting of Enlisted Educational Levels

since the advent of the all-volunteer force in 1973. The most dramatic increases are seen in the achievement of a high school education, as well as the achievement of "some college." From these data, it is not possible to pinpoint the reasons for such increases, but it is greatly possible that some of the improvement can be attributed to three factors: (1) the higher quality of enlisted accessions that have been entering the military (reference Figure 1.1), (2) the DoD Voluntary Education Programs initiated by the services, and (3) a shift to much greater career content in the force over the same period.[6] The remainder of this subsection describes educational opportunities.

High School Degree Program

Although almost all enlisted personnel have completed high school, some have not. The High School Degree Program provides the opportunity for enlisted personnel to attain a high school diploma or a General Educational Development (GED) certificate. This program is common to all military services, which pay 100 percent of the cost of high school equivalency instruction or proficiency testing and certification.

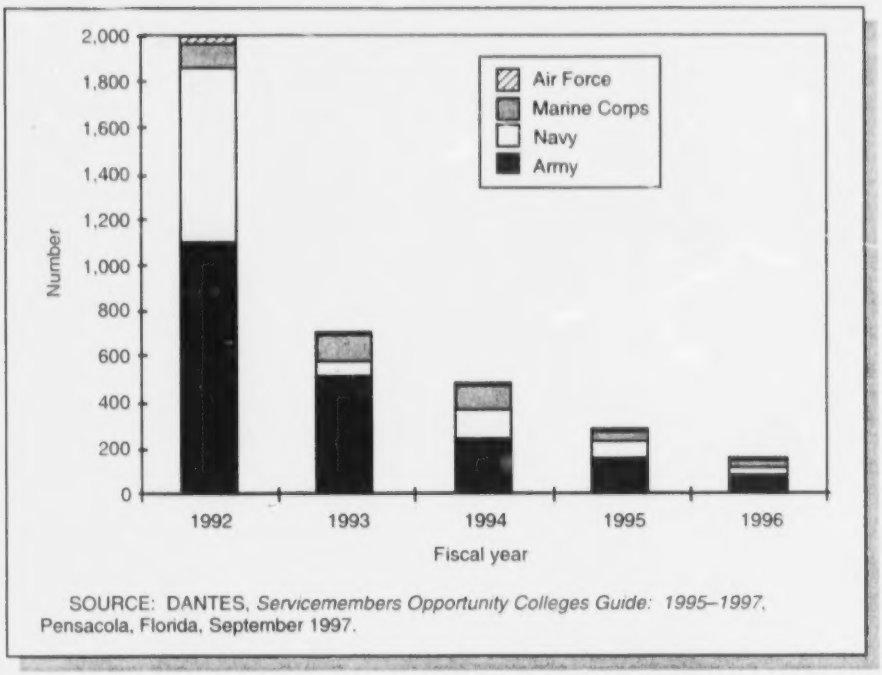
According to the guidance stated in Enclosure 6 of DoD Instruction 1322.25, "neither a military service nor DANTES can issue a certificate or similar document to servicemembers based on performance on high school equivalency tests."[7] Instead, military services are required to recognize attainment of high school completion or equivalency only after a state- or territory-approved agency has awarded the appropriate credential.

Figure 4.3 shows the number of high school degrees and GEDs that were funded by the High School Degree Program, FY92–FY96. Decreases in the number of individuals obtaining their high school degrees over this period can be attributed mainly to two factors: (1) the decrease in the number of enlisted personnel within the services as a result of force drawdowns since the early 1990s and (2) the enlistment of relatively more high-quality servicemembers.

---

[6]Servicemembers have tended to stay longer in the military and have been required to get more education (*career content*, through promotion requirements) to stay in; i.e., a servicemember cannot stay in the military without achieving education.

[7]Assistant Secretary of Defense for Force Management Policy, DoD Instruction 1322.25, Enclosure 6, February 5, 1997.



SOURCE: DANTES, *Servicemembers Opportunity Colleges Guide: 1995–1997*, Pensacola, Florida, September 1997.

Figure 4.3—Number of High School Degrees/GEDs Funded by DANTES

Community College of the Air Force

The Community College of the Air Force (CCAF) is one way that enlisted personnel can earn an associate's degree. CCAF, along with the federal service academies, is a federally chartered degree-granting institution, and is the only such institution that awards an associate's degree to enlisted personnel. Air Force enlisted personnel earn college credit for basic training, technical training, and professional military education (PME), which is applied toward CCAF degree requirements.

CCAF is regionally accredited and offers approximately 70 degree programs in five general career areas: aircraft and missile maintenance, electronics and telecommunications, allied health, logistics and resources, and public and support services. Each program leads to an Associate in Applied Science degree upon completion of a minimum of 64 semester hours of Air Force and civilian course work.

With more than 409,000 registered students, the college is the largest multicampus community college in the world. Its affiliated schools are located in

30 states, the District of Columbia, and eight foreign locations. More than 6,000 CCAF faculty members provide instruction to enlisted personnel. More than a million transcripts have been issued in the past ten years. In 1994 alone, CCAF students earned 1.2 million hours of CCAF credit. Since issuing its first degree in 1977, the college has awarded more than 160,000 degrees.

On July 1, 1993, the Community College of the Air Force realigned under Air University as Air University became the educational component of the newly redesignated Air Education and Training Command (formerly Air Training Command). However, the Commander of Air Education and Training Command remained the degree-conferring authority for the college.

Although the CCAF has historically focused on enlisted members within the Air Force, in December 1994, the college began registering other service instructors in the Instructor of Technology and Military Science degree program. In April 1995, the college awarded degrees to members of the Army, Navy, and Marine Corps.[8]

Servicemembers Opportunity Colleges

Whereas the CCAF is sponsored by the Air Force and is primarily used by Air Force enlisted personnel, the Army, Navy, and Marine Corps participate in another program that provides both associate's and bachelor's degrees. Known as the Servicemembers Opportunity Colleges (SOC),[9] this program was created in 1972, the same year as the CCAF. The program was initially chartered so that servicemembers could earn their degrees while still moving from base to base during their career. Today, SOC is a consortium of more than 1,200 colleges and universities providing educational opportunities for servicemembers and their families.

SOC is sponsored by the American Association of State Colleges and Universities (AASCU) and the American Association of Community Colleges (AACC). SOC is funded by the DoD through a contract with AASCU and managed for the DoD by the DANTES organization. The SOC program is divided into six separate areas: SOC Army Degrees (SOCAD),[10] SOC Navy Degrees (SOCNAV), SOC Marine Degrees (SOCMAR), SOC Teacher Preparation for Servicemembers

---

[8]Community College of the Air Force homepage, http://www.au.af.mil/au/ccaf/, October 15, 1997.

[9]Servicemembers Opportunity Colleges homepage, http://voled.doded.mil/soc/, October 10, 1997.

[10]Each version of the SOC program for the Army, Navy, and Marine Corps has a 2-year- and a 4-year-degree option.

(SOCED), SOC Army National Guard (SOCG), and the Concurrent Admissions Program for Army Enlistees (CONAP). Table 4.1 shows enrollment statistics for the various SOC programs during FY97.

Universities and colleges that participate in the SOC program must meet six conditions:[11]

- Be listed in the *Higher Education Directory*[12]
- Be a degree-granting university that is accredited by an accrediting agency recognized by the Commission on Higher Education Accreditation (CHEA)
- Meet appropriate provisions of DoD Directive 1322.8
- Be approved for educational benefits by the Department of Veterans' Affairs State Approving Agency
- Agree to submit data for the SOC Guide
- Not be identified in the Guaranteed Student Loan Data Bank as having excessive student-loan default rates.

Table 4.1

Cumulative Servicemembers Opportunity Colleges and Student Enrollments Through May 1997

Program	Number of Participating Colleges[a] in the System	Student Enrollment
SOCAD-2	82	242,986
SOCAD-4	59	43,018
SOCNAV-2	62	32,925
SOCNAV-4	40	15,394
SOCMAR-2	37	1,414
SOCMAR-4	29	1,916
Total	136	337,653

SOURCE: SOC enrollment data, May 12, 1997.

[a]Because some of the colleges participate in both the 2- and 4-year programs, as well as in multiple SOC programs, the "Number of Participating Colleges" column will not add to the total; however, the total was taken from the SOC data from May 12, 1997, and is accurate.

[11]Defense Activity for Non-Traditional Education Support, *Servicemembers Opportunity Colleges Guide: 1995–1997*, Pensacola, Florida, 1997, pp. ii–iii.

[12]Higher Education Publications, Inc., *The HEP Higher Education Directory*. Falls Church, Va., 1997.

As part of the program, servicemembers are allowed to transfer their college credits from university to university within the SOC network. Participating colleges guarantee that they will accept each other's courses in transfer within curriculum areas such as management, computer studies, interdisciplinary studies, and others. Likewise, military members are able to count aspects of their military training and experience for college credit within the SOC program.[13]

Active-duty students may use tuition assistance or in-service GI Bill benefits to fund their degree program within SOC. Reserve and National Guard servicemembers are also able to use the SOC program. After separating from the military, it is possible for a student to transfer credits from the SOC program to other education programs that recognize the academic credits. Figure 4.4 shows the process by which a servicemember earns an associate's or bachelor's degree through the SOC program.

Navy Program for Afloat College Education

Because of the mobility of the fleet, the Navy has taken into account the difficulty of delivering educational programs to ships at sea. The Program for Afloat

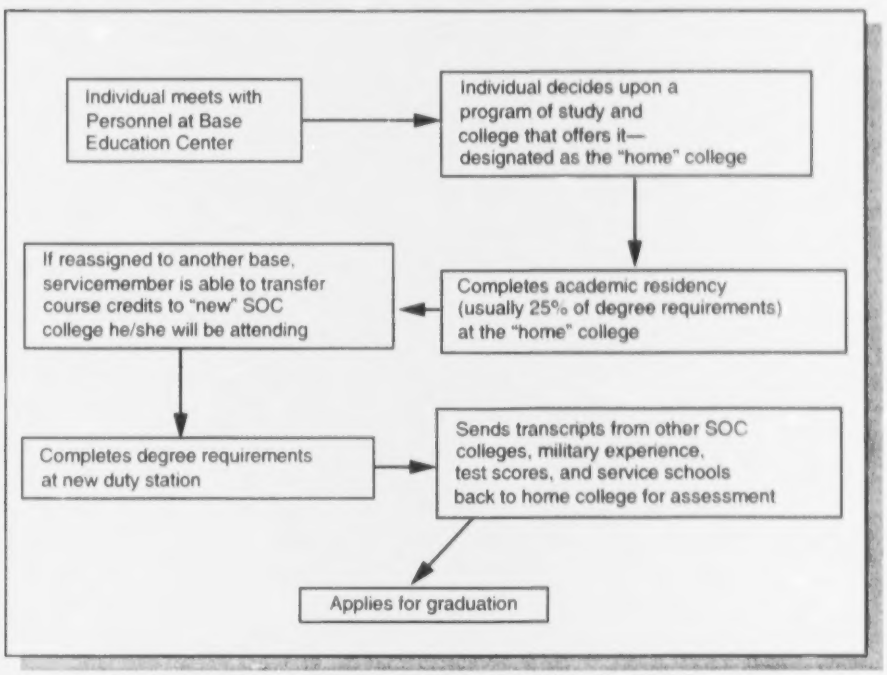

Individual meets with Personnel at Base Education Center
Individual decides upon a program of study and college that offers it—designated as the "home" college
Completes academic residency (usually 25% of degree requirements) at the "home" college
If reassigned to another base, servicemember is able to transfer course credits to "new" SOC college he/she will be attending
Completes degree requirements at new duty station
Sends transcripts from other SOC colleges, military experience, test scores, and service schools back to home college for assessment
Applies for graduation

Figure 4.4—Process for Earning a Degree Within the SOC Program

[13]The SOC sets guidelines on what types of experience and training count for college course credit.

College Education (PACE) delivers education to servicemembers aboard ships at sea. Courses are taught by instructors who actually deploy with the ship or by an electronic independent-study option that delivers courses by computer interactive video. Marines may also participate in PACE. The PACE program is affiliated with colleges in a distance-learning format and is structured so that students are able to complete formal education.

Credit for Experience

Another opportunity open for servicemembers is getting college credit for military training and experience. The American Council on Education establishes the recommended amount of credit to be awarded. Education counselors at the base level assist servicemembers with determining college credit. ACE has evaluated most military service schools and military occupational specialties and has recommended college or vocational credit where appropriate. To be awarded the actual credit, the servicemember must enroll in a school and have that school award credit according to its criteria. Actual credit awarded may be less than ACE recommends, because of individual school policies.

The DANTES organization also sponsors various testing and certification programs in order to document a servicemember's experience and knowledge. Figure 4.5 shows the type and number of tests that DANTES provided to servicemembers from FY92 through FY96.[14] Examples of the type of test that DANTES conducts for servicemembers include the GED exam, the National Teacher Exam (NTE), the Graduate Record Examination (GRE), the Graduate Management Admissions Test (GMAT), the American College Test (ACT), the Scholastic Aptitude Test (SAT), DANTES Subject Standardization Tests (DSSTs), College Level Entrance Program (CLEP), and Guidance Tests.

Results from the DoD Voluntary Education Program

Figures 4.6 and 4.7 show the number of associate's and bachelor's degrees that were awarded by use of the DoD Voluntary Education Program. Although it is not possible to determine the number of enlisted and officers by looking at these charts, we can assume that most of the graduates are enlisted personnel, because almost all commissioned officers already have 4-year college degrees. Graduates

[14]Test data include active-duty, reserve, and National Guard information.

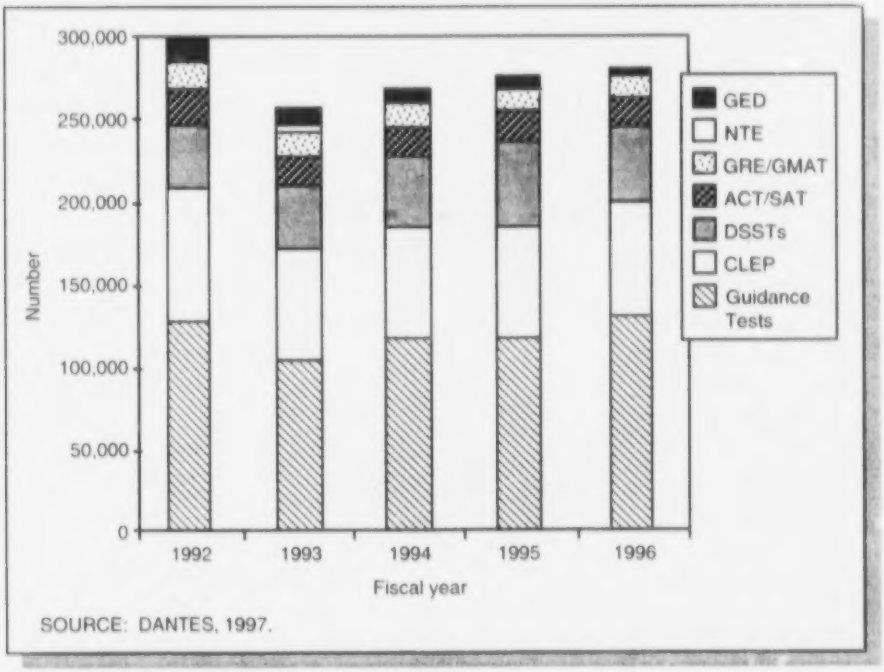


Figure 4.5—Number of DANTES-Administered Tests from FY92 Through FY96

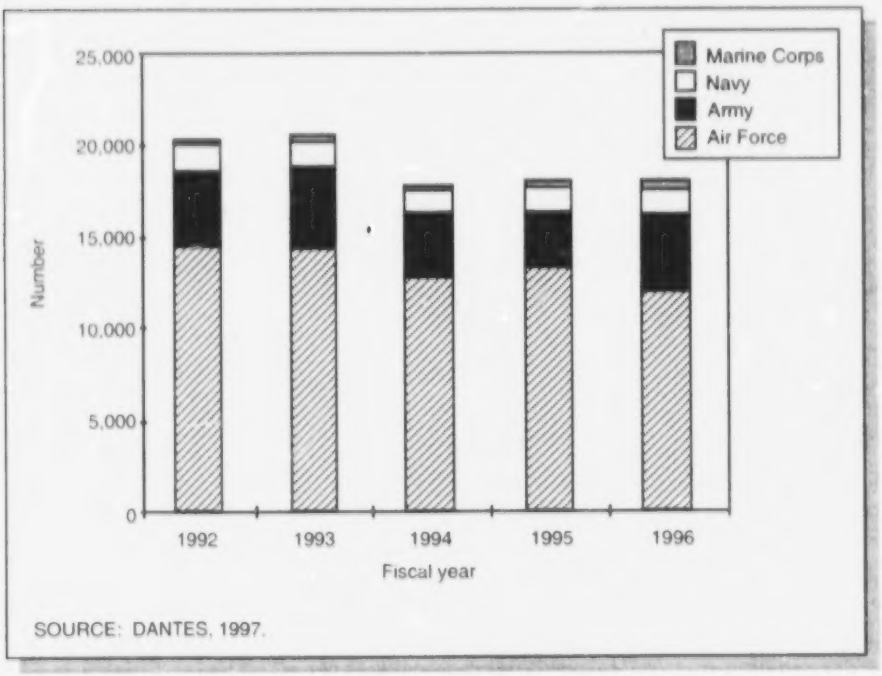


Figure 4.6—Number of Associate's Degrees Awarded

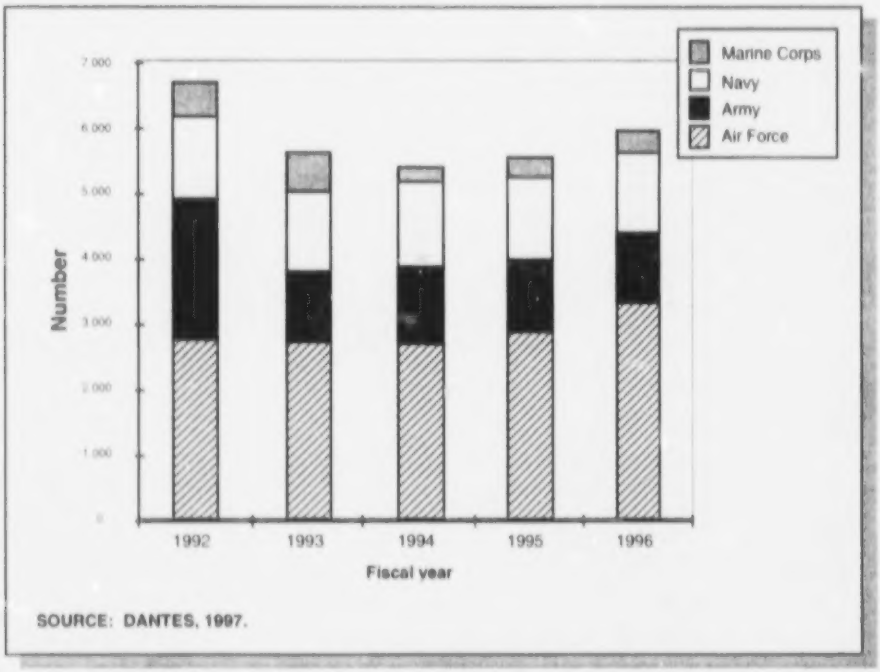


Figure 4.7—Number of Bachelor's Degrees Awarded

listed on these charts earned their degrees through a combination of CCAF, SOC, local universities, distance learning, and on-campus education programs covered by the Voluntary Education Program. In the cases of both associate's and bachelor's degrees, Air Force enlisted personnel have earned more degrees under the Voluntary Education Program than have the other three services combined.

Other Education Programs

Marine Staff Non-Commissioned Officer Degree Completion Program. In the Staff Non-Commissioned Officer (SNCO) degree completion program, enlisted Marines can complete their college degrees in specific disciplines on a full-time basis while receiving regular pay. To qualify, individuals must have at least 60 semester-hours. Members do not receive tuition assistance; instead, their educations are paid for through other training accounts. This program is not considered part of the DoD Voluntary Education Program. In FY97, 20 Marines were selected to participate in this program.[15]

[15]U.S. Marine Corps, *FY97 Staff Noncommissioned Officer Degree Completion Program*. Washington, D.C.: ALMAR 242/97, July 25, 1997.

Navy Enlisted Education Advancement Program. The Navy Enlisted Education Advancement Program (EEAP) provides enlisted members with an opportunity to earn an associate's or bachelor's degree. Although this program is considered to be a special program and not covered under the Voluntary Education Program funding scheme, it nevertheless represents an opportunity for enlisted servicemembers to earn a college degree. Students are given two years to attend college full-time and earn as much college credit as possible. Members may enroll in any accredited institution, usually in the area of the servicemember's duty station. Students receive full pay and allowances while attending college; however, they must pay for all tuition, fees, and books. If eligible, they may use their in-service GI Bill or Veteran's Educational Assistance Program (VEAP). Tuition assistance may not be used for this program.

Officer Educational Opportunities for Advanced Degrees

Although officers are allowed to participate in many of the programs listed in the preceding subsection, most do not because they have already earned their high school diploma and associate's or bachelor's degree. In fact, 99 percent of all officers receive their college education as a prerequisite for commissioning in their service. Instead, the Voluntary Education Program benefits that are used by officers are for graduate study.

Officers can earn their master's or doctoral degree in one of several ways. One way is to use tuition assistance and to attend a college part-time while working in their usual job. Other ways to earn advanced degrees include selection for special programs of full-time study at either military graduate schools or civilian universities. This subsection highlights various methods officers have at their disposal.

Use of Tuition Assistance Under the Voluntary Education System

Although tuition assistance is discussed in greater detail later in this section, it is mentioned here for the purpose of describing how officers receive their graduate degrees under the Voluntary Education Program. Figures 4.8 and 4.9 demonstrate that a significant number of individuals across all military services earned their graduate degrees under the Voluntary Education Program. Rank is not specifically delineated; however, it seems logical that many of the individuals who earn graduate degrees are officers. At the very least, it can be stated that officer are more likely to enroll and complete graduate degrees than are enlisted servicemembers because (1) most officers enter the armed forces with a

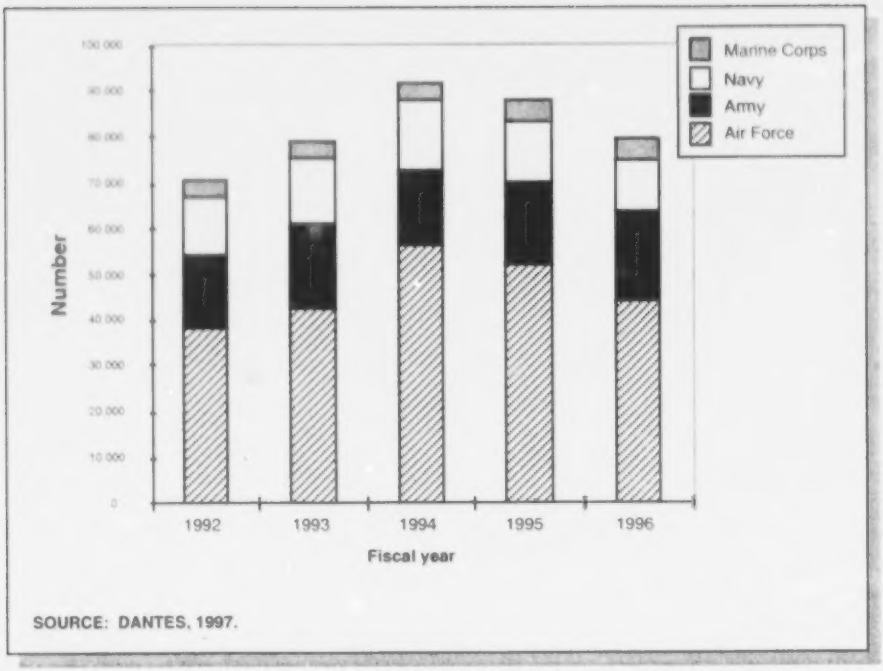


Figure 4.8—Number of Individuals Enrolled in Graduate Programs Under the DoD Voluntary Education Program

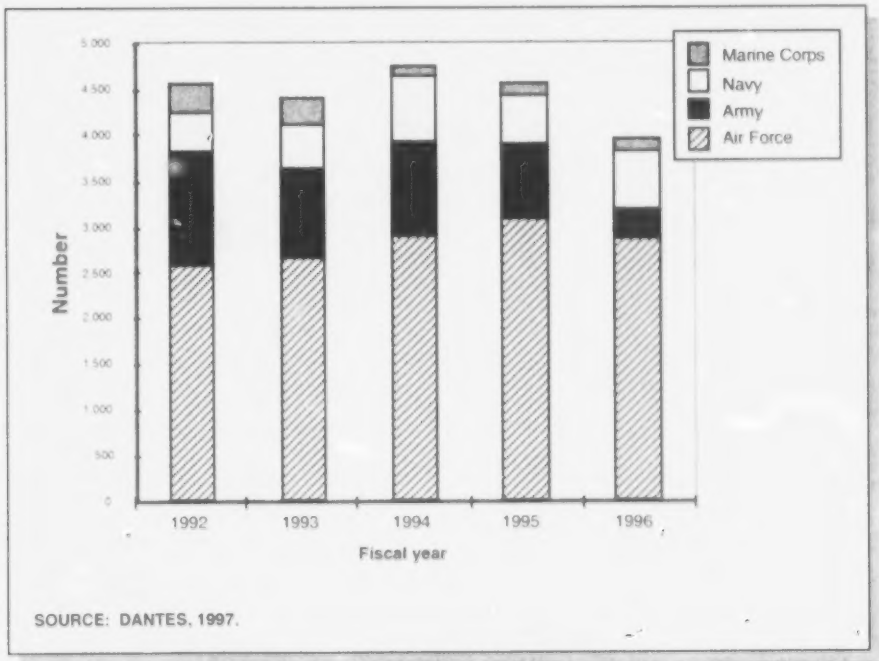


Figure 4.9—Number of Graduate Degrees Awarded

bachelor's degree and (2) the services encourage officers to pursue graduate education. Of all the services, the Air Force had both the most enrollees in graduate programs and the most graduates during FY92–FY96. Similar to the results for associate's and bachelor's degrees with respect to Air Force enlisted personnel, it appears that Air Force officers utilize the Voluntary Education Programs the most and also end up with the most graduate degrees. In this case, it is possible that such enrollment numbers are driven by the individual service's emphasis upon the necessity of a graduate degree for promotion and its willingness to pay for people to attain it.

Special Advanced-Degree Programs

Although not funded as part of the DoD Voluntary Education Program, several types of programs for pursuing advanced degrees are available to officers of all services. Some of the more common programs are mentioned here. Instead of using tuition assistance under the DoD Voluntary Education Program, all of these programs require competitive selection against other officers. And because they tend to be more prestigious, these programs provide greater benefits than does tuition assistance. For instance, many of the selective, in-residence, advanced-degree programs pay full tuition, books, and fees while providing full pay to the officer. All programs listed here lead to a master's degree within two years or a doctoral degree within three years.

Air Force Institute of Technology. The Air Force Institute of Technology (AFIT) offers a wide variety of short courses and university-level programs, including resident programs in engineering and logistics, and Air Force-sponsored degree programs at civilian institutions. All programs associated with AFIT are at either the master's or doctoral level. Individuals selected for AFIT-sponsored programs receive full pay, textbooks, and compensation for fees while earning their degrees.[16]

Naval Postgraduate School. The Navy's graduate institution, the Naval Postgraduate School (NPGS), is located in Monterey, California. After three years of commissioned service, academically qualified Navy (and other services') officers are selected to attend and study one of the 40 technical and managerial curricula that are relevant to the Navy. Officers may also earn advanced degrees at civilian institutions in programs not offered at NPGS. NPGS also offers a continuing-education program through which officers can take no-cost

[16]There has recently been discussion of the Air Force eliminating the AFIT in-residence degree program; however, this would not preclude the Air Force from using an AFIT (or other) structured organization to arrange graduate education for officers at civilian institutions.

correspondence courses for academic credits while at any duty station, aboard ship or on shore, anywhere in the world.

Olmsted Scholarship Program. A total of three commissioned Navy and/or Marine Corps officers, three Air Force officers, and three Army officers with exceptional scholastic ability and a strong aptitude for a foreign language are selected each year from a highly competitive field for an Olmsted Scholarship. Selectees pursue two years of graduate study at a foreign university while receiving full pay and allowances. This program requires students to become fluent in the language of the country in which they are studying.

Marine Corps Officer Education Programs. Four education programs have been designed specifically for Marine Corps officers: the College Degree Program, the Special Education Program, the Advanced Degree Program, and the Funded Legal Education Program. The College Degree Program provides selected Marine officers the opportunity to earn a bachelor's degree by attending an accredited college or university as a full-time student. The Special Education Program provides selected Marine officers the opportunity to receive, as full-time students, advanced education that will lead to a post-graduate degree in specified disciplines. The Advanced Degree Program provides selected Marine officers the opportunity to earn a post-graduate degree by attending an accredited college or university as full-time students. The Funded Legal Education Program provides selected Marine officers the opportunity to earn the bachelor of laws or juris doctor degree through full-time, funded study.

The Army has programs for advanced degrees for its officers as well. Although the Army does not have an infrastructural equivalent to AFIT or NPGS, Army officers do get selected for the opportunity to attend graduate school at civilian universities.

Methods of Financing Post–Secondary Education

There is generally no cost to the individual if an enlisted servicemember or an officer is selected for a competitive program for education. For many servicemembers, however, the way to gain more formal education is through the DoD Voluntary Education Program or out of their own pocket. Enlisted and officers have three primary ways to fund their post-secondary formal education: (1) tuition assistance (TA); (2) the Montgomery GI Bill; and (3) the Veteran's Educational Assistance Program (VEAP). This subsection explores the three financing methods in greater detail.

Tuition Assistance

Enclosure 2 to DoD 1322.25 states that "tuition assistance shall be available for servicemembers participating in high school completion and approved post-secondary education programs."[17] In this context, *approved courses* are those that are part of an identified course of study leading to a post-secondary certificate or degree. Tuition assistance is applied at the following rates: 100 percent of the cost of approved high school completion programs for servicemembers who have not been awarded a high school or equivalency diploma and who are enrolled in such programs; and not more than 75 percent of an institution's tuition and related instructional charges for each college course that a service member enrolls in. These limitations do not apply to the Navy Program for Afloat College Education (PACE).

In accordance with Section 2007(a)(3) of Title 10, United States Code, tuition assistance is available to a commissioned officer on active duty only if the officer agrees to remain on active duty for a period of at least two years after the completion of the education or training paid for by tuition assistance. Reimbursement is required for an unfulfilled tuition-assistance obligation. Except in extenuating circumstances, students must complete courses with a passing grade to retain tuition assistance.

Tuition assistance is not authorized for any course for which a servicemember receives reimbursement in whole or in part from any other federal source when the payment would constitute a duplication of benefits. Payments from other sources shall be applied first. Veterans education benefits are not payable for courses paid in whole or in part by the armed forces. Institutions have a responsibility to ensure that students do not receive a duplication of benefits. Tuition assistance is provided only for courses offered by post-secondary institutions accredited by a national or regional accrediting body recognized by the Department of Education and the Council for Higher Education Accreditation.

Figure 4.10 shows the total expenditures by service during FY92–FY96. Figure 4.11 shows the expenditures per student enrolled in the DoD Voluntary Education Program. All dollars are expressed in then-year (TY) amounts (nominal dollars). From these figures, the Air Force appears to spend more on its students than does any other service.

[17] Assistant Secretary of Defense for Force Management Policy, DoD Instruction 1322.25, 1997.

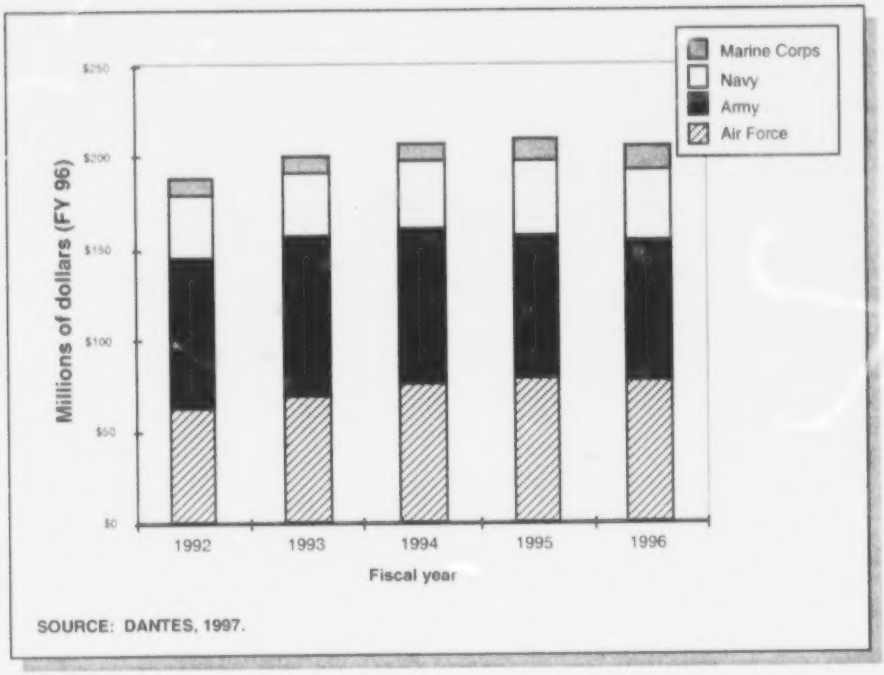


Figure 4.10—Total DoD Voluntary Education Program Expenditures

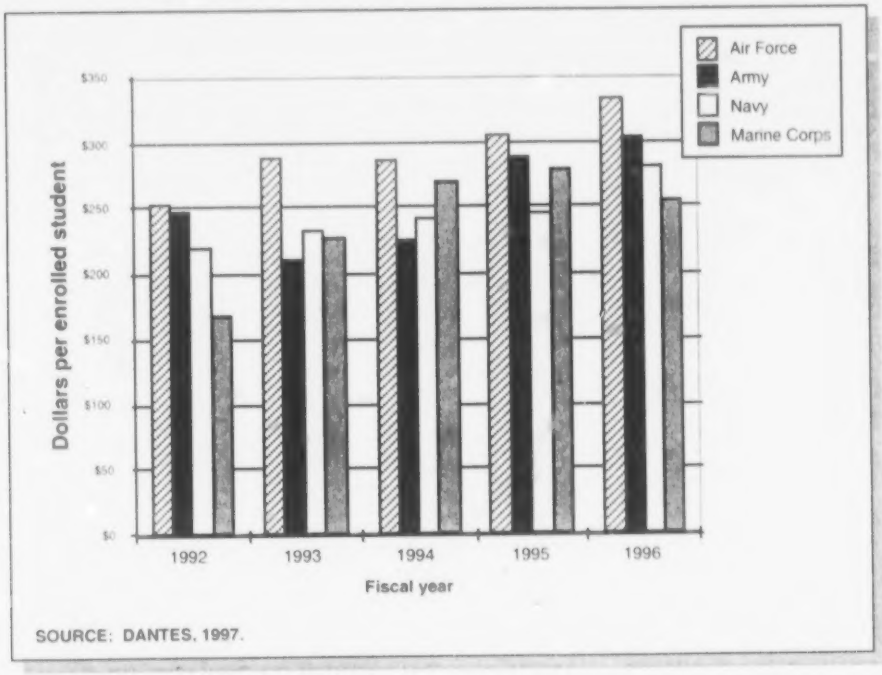


Figure 4.11—DoD Voluntary Education Expenditures per Enrolled Student

Air Force. The Air Force tuition assistance program provides active-duty personnel with financial aid for tuition and instructional expenses (such as lab fees) incurred while pursuing voluntary, off-duty education programs through accredited approved educational institutions. The Air Force currently pays 75 percent of tuition for Air Force members, which is capped at $250 per semester-hour and $166 per quarter-hour. Officers incur an Active-Duty Service Commitment (ADSC) of two years from the course-completion date for the latest course taken with tuition assistance. This commitment runs concurrently with any other ADSCs that may also exist. Enlisted personnel may use TA as long as they do not have a separation pending from the Air Force.

To apply for TA, personnel must first see a counselor. The counselor establishes basic eligibility, provides specific guidance concerning student responsibilities when using TA, and issues an AF Form 1227, Authority for Tuition Assistance Application. The form must be signed by the student, then returned to the Base Education Center for approval before the student registers for classes. When accepting tuition assistance, students agree to assume certain obligations as evidenced by their signature on the AF Form 1227. Obligations include attending classes regularly and reimbursing the Air Force if a course is dropped after the last add/drop date or a failing grade is received ("D" for graduate work). If a grade of "I" (incomplete) is received, it must be changed to an acceptable grade within six months or the time prescribed by the school. If permanent change of station (PCS) orders are issued, incomplete grades must be removed or reimbursement made prior to clearing the base.[18]

Army. As of March 31, 1996, all active-duty Army servicemembers are authorized up to 75 percent tuition assistance for 15 semester-hours per fiscal year. Payment per semester hour will not exceed $60 for freshman and sophomore college courses; $85 for junior and senior courses; and $170 for graduate-level courses. Local base commanders may augment TA funds as resources permit. Exact amounts may vary by educational center at various bases as well. The maximum allowed for vocational/technical school courses is $750 per fiscal year.[19]

Navy and Marine Corps. The Navy and Marine Corps TA Program provides eligible active-duty servicemembers with financial assistance to pursue approved educational programs at civilian secondary or post–secondary institutions during their off-duty time. Tuition assistance may be used at the secondary level to complete courses leading to a high school diploma. In addition, personnel may

[18]http://tuvok.au.af.mil/42abw/mss/eo.html/, December 15, 1997.

[19]http://www.perscom.army.mil/tagd/edpage.htm, December 1, 1997.

apply tuition-assistance benefits to courses taken at approved institutions. Tuition assistance may be used for undergraduate, graduate, or vocational/technical study.

Effective November 19, 1996, Navy and Marine Corps members enrolling in degree-related distance-learning courses lasting 18 weeks or less are given up-front TA funding. Also, the Navy and the Marine Corps raised their overall vocational/technical TA caps, including non-degree courses, to $2,500 per fiscal year from FY96. The limit for degree-related courses will be determined by the program level: $2,500 per fiscal year for undergraduate courses and $3,500 for graduate- and doctoral-level courses.[20]

Table 4.2 provides a summary of TA opportunities in each service.

Montgomery GI Bill

The Montgomery GI Bill (MGIB) is administered by the Department of Veterans' Affairs (VA) and is for military personnel in the Air Force, Army, Marine Corps,

Table 4.2

Tuition Assistance Opportunities[a]

Category	Air Force	Army	Navy/ Marine Corps
College tuition reimbursement	75 percent	75 percent	75 percent
Maximum number of college-credit hours	No limit	15 semester hours per year	$2,500 per year for undergraduate courses; $3,500 per year for graduate school
Maximum dollar amount per semester-hour credit	$250 per credit-hour	$60 for freshman/sophomore courses; $85 for junior/senior courses; $170 for graduate courses	No limit

[a]This information is current as of November 1997. In fiscal year 1999, the DoD will adopt a uniform tuition assistance plan across all of the services. Under the uniform plan, each service will pay up to 75 percent of the cost of a course, up to a maximum of $187.50 per credit-hour. The new standard will let each servicemember receive $3,500 per year. See Andrew Compart, "Tuition Aid Rules Change," *Navy Times*, July 28, 1997.

[20]http://voled.doded.mil/active/usmc/index.htm; http://voled.doded.mil/active/navy/index.htm#ta/

and Navy. It is primarily known as a "veteran's" benefit because it provides a program of educational benefits to individuals who both entered active duty for the first time after June 30, 1985, and received an honorable discharge. However, servicemembers on active duty may also use MGIB benefits as long as they have served past their initial reenlistment.[21] *Active duty* includes full-time National Guard duty performed after November 29, 1989.

The participant must have a high school diploma or an equivalency certificate before the first period of active duty ends. Completing 12 credit-hours toward a college degree also meets this requirement. Individuals who initially serve a continuous period of at least three years of active duty, even though they were initially obligated to serve less, will be paid the maximum benefit. Benefits under this program generally end 10 years from the date of the veteran's last discharge or release from active duty.

To participate in the Montgomery GI Bill, servicemembers have their military pay reduced by $100 per month for the first 12 months of active duty. This money is not refundable. Veterans who served on active duty for three years or more, or two years active duty plus four years in the Selected Reserve or National Guard, will receive $439.85 per month in basic benefits for 36 months. Those who enlisted and served for less than three years will receive $357.38 per month.[22] According to the MGIB Pamphlet published by the VA, "servicemembers on active duty or veterans who are training at less than half-time will be paid the lesser of: (1) the monthly rate based on tuition and fees for the course(s); or (2) the maximum monthly rate based on the training time."[23]

The following are available under the Montgomery GI Bill:

- Courses at colleges and universities leading to associate's, bachelor's, or graduate degrees, and accredited independent study.
- Courses leading to a certificate or diploma from business, technical, or vocational schools.
- Apprenticeship or on-the-job training programs for individuals not on active duty.
- Correspondence courses, under certain conditions.

[21]U.S. Department of Veterans' Affairs, *Summary of Educational Benefits Under the Montgomery GI Bill Active Duty Educational Assistance Program*. Washington D.C.: VA Pamphlet 22-90-2, 1996.

[22]The Consumer Price Index changes these amounts each year.

[23]U.S. Department of Veterans' Affairs, VA Pamphlet 22-90-2, 1996.

- Flight training. Before beginning training, the veteran must have a private pilot's license and meet the physical requirements for a commercial license. Benefits also may be received for flying hours up to the minimum required by the Federal Aviation Administration (FAA) for the rating or certification being pursued.
- Tutorial assistance benefits if individual is enrolled in school half-time or more. Refresher, deficiency, and other training also may be available.
- State-approved alternative teacher-certification programs.[24]

College Fund

The purpose of the College Fund is to recruit qualified high school graduates into critical or hard-to-fill ratings. The College Fund is a supplemental incentive program to the Montgomery GI Bill and applies to only the Marine Corps, Army, and the Navy. The Air Force does not have a College Fund supplement to its GI Bill. The requirements for the Bill include the following:

- Entered active duty on or after November 21, 1989, and agreed to serve on active duty for 3 or 4 years. The Army offers the College Fund for 2-year enlistments in certain combat-arms skills.
- Graduated from high school; no equivalency accepted.
- Achieved an Armed Forces Qualification Test (AFQT) score of 50 or higher.
- Is 17–35 years old and a U.S. citizen.
- Enlisted in a qualifying rating and enrolled in the MGIB.
- Received an honorable discharge upon separation.

Benefits from the College Fund vary according to the number of years an individual was enlisted in the service; however, when combined with the GI Bill, the benefits were as high as $40,000 for a 4-year enlistment in the Army and Navy or $30,000 for the Marine Corps as of FY97.[25] In 1998, the maximums changed to $50,000 for these three services.

---

[24]U.S. Department of Veterans' Affairs, VA Pamphlet 22-90-2, 1996.

[25]U.S. Army Recruiting (USAREC), *Montgomery GI Bill (MGIB), Army College Fund, and Loan Repayment Program*, Regulation 621-1, 1997.

Loan Repayment Program

The Loan Repayment Program (LRP) is an incentive to increase enlistment of Army and Navy ($10,000 maximum) recruits with at least some college education.[26] Disenrollment from the Montgomery GI Bill is necessary to enlist for the LRP. For each year of service, the Army will repay $1,500, or 33.3 percent of an eligible student loan, whichever is greater, up to a $65,000 maximum. When a loan exceeds $65,000, 33.3 percent of the maximum will be paid for three years. The unpaid principal balance will be paid, but no payments will be made for delinquent charges or interest amounts that have accrued because of default.

Criteria for applicant eligibility include that the servicemember be a non–prior-service recruit, be a high school graduate, have a score of 50 or higher on the AFQT, and enlist for a specific critical occupation. The applicant must also have incurred one of the following loans since October 1, 1975, and before enlistment:

- The Stafford Student Loan
- The Perkins Loan
- Federally Insured Student Loan
- Auxiliary Loans to Assist Students
- Parent's Loans for Undergraduate Students
- Supplemental Loans for Students
- Consolidated Loan Program.

Veteran's Educational Assistance Program

Under the Veteran's Educational Assistance Program, active-duty personnel voluntarily participated in a plan to save for education or training. Their savings were administered and augmented by the federal government.[27] Servicemembers were eligible to enroll in VEAP if they entered active duty for the first time after December 31, 1976, and before July 1, 1985. Some contribution to VEAP must have been made prior to April 1, 1987. The maximum participant contribution is $2,700. While on active duty, participants made a lump-sum contribution to the training fund. A servicemember who participated in VEAP is eligible to receive benefits while on active duty if (1) at least three months of

[26]U.S. Army Recruiting (USAREC), Regulation 621-1, 1997.

[27]The VEAP is no longer available for new military servicemembers. The purpose of this discussion is to highlight an educational-benefit program that is still in existence for some servicemembers who made contributions prior to 1987.

contributions are available, except for high school or elementary school, in which case only one month of contributions is needed and (2) the first active-duty commitment is completed.

If an individual's first term is for more than six years, benefits may be available after six years. To attend an elementary or high school program, the individual must be in the last six months of the first enlistment. A veteran who participated in VEAP is eligible to receive benefits if the discharge was under conditions other than dishonorable and (1) the first enlistment was prior to September 8, 1980, or the participant entered active duty as an officer on or before October 17, 1981, and served for a continuous period of 181 days or more, or was discharged for a service-connected disability; or (2) the participant enlisted for the first time on or after September 8, 1980, or entered active duty as an officer on or after October 17, 1981, and completed 24 continuous months of active duty.

Education eligibility may be established even though the required active duty is not completed, if the veteran (1) receives VA disability compensation or military disability retirement, (2) served a previous period of at least 24 continuous months of active duty before October 17, 1981, or (3) was discharged or released for an early-separation, hardship, or service-connected disability. An individual who contributed or who could have contributed to VEAP before being involuntarily separated from active duty with an honorable discharge may elect, before separation, to receive Montgomery GI Bill (Active-Duty) benefits.

VEAP participants may pursue associate's, bachelor's, or graduate degrees at colleges or universities. They may also take courses leading to a certificate or diploma from business, technical, or vocational schools. Other opportunities may include apprenticeship or on-the-job training programs; cooperative courses; correspondence-school courses; refresher, deficiency, and other training; and state-approved teacher-certification programs. Flight training also may be pursued, including solo flying hours up to the minimum required by the Federal Aviation Administration (FAA) for the rating or certification being pursued. Before beginning training, the veteran must have a private pilot's license and meet the physical requirements for a commercial license.

When the participant elects to use VEAP benefits to pursue an approved course of education or training, the Defense Department will match $2 for every $1 of the participant's contribution to the fund. The DoD may also make additional contributions to the fund in exchange for special duties performed by the participant. A typical VEAP payment is as follows: A participant contributes $1,800 over a 36-month period, and the government adds $3,600 (2-for-1 match); there is no additional contribution from the DoD. This results in a total

entitlement amount of $5,400, which would be divided by 36 months, yielding a monthly benefit of $150 for full-time schooling for the veteran.

A veteran has 10 years from the date of last discharge or release from active-duty to use VEAP benefits. This 10-year period can be extended by the amount of time the veteran could not train because of a disability or because of being held by a foreign government or power. The 10-year period may also be extended if the veteran reenters active duty for 90 continuous days or more after becoming eligible. The extension ends 10 years from the date of discharge or release from the later active-duty period. A veteran with a discharge upgraded by the military will have 10 years from the date of the upgrade.[28]

Comparison of Financing Alternatives

As indicated in this subsection, several financing alternatives are available to officers and enlisted personnel to pursue education on and off duty. Whereas tuition assistance applies to both officers and enlisted and covers education during active duty, other sources, such as the GI Bill, College Funds, and Loan Repayment Programs, vary in purpose, duration, and amount. Table 4.3 summarizes the characteristics of the various programs.

Although total dollar amounts are not available for these programs, it is interesting to note the probable differences in emphasis among the services on various types of education. For example, the Army, Navy, and Marine Corps offer very generous College Fund programs. With the exception of the GI Bill, it appears that the Air Force tends to emphasize tuition assistance as its core program. Intuitively, the different programs have different incentives as well. Whereas the College Fund may attract individuals who enter the service for money and then leave, tuition assistance requires that individuals remain on active duty to reap educational benefits.

[28]1997 VEAP benefits pamphlet published by the VA, available on the Web at http://www.va.gov/benefits/Education/C30pam.htm, January 10, 1998.

Table 4.3

Comparison of Funding Sources

Type	Benefit	Duration	Applicability	Officer or Enlisted
Tuition Assistance	75 percent of college tuition to specific maximum	Unlimited as long as funds exist	All services and all active-duty personnel	Both
Montgomery GI Bill	$15,830 maximum for education	Lasts up to 10 years after leaving service	All services. Army offers for less than 4-year enlistment; other services require 4-year enlistment	Usually just enlisted personnel
College Fund combined with Montgomery GI Bill	$30,000 maximum for Marine Corps; $40,000 maximum for Army and Navy. In 1998, the maximum changed to $50,000 for these three services.	Lasts up to 10 years after leaving service	Navy, Marine Corps, Army; high-quality: specific occupation and terms of service	Usually just enlisted personnel
Loan Repayment Program	$65,000 maximum for Army; $10,000 maximum for Navy	Payment for 3 years Army member is on active duty	Army and Navy	Enlisted
VEAP, no longer available for new accessions	$8,100 maximum (2-for-1 investment: member contributes up to $2,700; government pays up to $5,400)	Lasts up to 10 years after leaving service; deadline for MGIB conversion is November 1997	All services; only for individuals who entered between 1977 and 1985	Enlisted

5. The Role of Education in the Military Promotion Process

From the preceding sections, it is evident that military officers and enlisted servicemembers have many opportunities for pursuing and financing their post-secondary education. From the services' perspectives, the DoD has many reasons for being willing to finance formal education for servicemembers. The military might gain at least three types of utility from educating its forces: (1) increased productivity, (2) longer retention, and (3) increased morale. Admittedly, such gains can be fairly intangible and are difficult to measure, as evidenced by the limited research published on the subject.

However, one proxy for assessing how the services value education is examining their promotion systems to determine whether a premium is awarded to educational progression. For example, if the military valued education, it would tend to promote those people who had earned college degrees or had taken college courses at higher rates than it would those who had not pursued further education, holding all else constant (experience, military training, performance). This is not to imply that education is more important than other factors are in the promotion process, but, rather, that it is one of many.

In this section, I present education-weighting information from published materials on promotion standards and methodology to suggest possible indicators of a tangible value the services place on education.[1]

Enlisted Promotions

Promotion of enlisted personnel across all of the services is based on a three-tiered system.[2] The first tier of promotions (E-1 through E-3/E-4) tends to be noncompetitive and based on time-in-grade (TIG) and time-in-service (TIS) criteria. The middle tier, which includes junior NCO ranks, such as E-3/E-4 to

[1]See Albert A. Robbert et al., *Differentiation in Military Human Resource Management*, Santa Monica, Calif.: RAND, MR-838-OSD, 1997, for an analysis of how military servicemembers perceive various performance indicators (such as formal education) in determining compensation. It is obvious that an econometric approach to determining the effect of education on promotion would be key to the valuing process.

[2]For greater detail and a more comprehensive review of the subject, refer to work-in-progress by RAND colleague Stephanie Williamson on enlisted-promotion systems.

E-6/E-7, involves more-centralized, competitive selection boards. These boards promote individuals on the basis of a composite score of various factors, including education, professional training, and performance reviews. In third-tier promotions, senior enlisted servicemembers, E-5/E-7 through E-9, are selected for promotion by competitive boards that focus mainly on recommendations from senior raters. At the senior NCO level, formal academic education[3] is considered by promotion boards as supplemental information; it is not assessed quantitatively as it is for middle-tier promotions.

Although all of the services' promotion systems are similar in their reliance on the three-tiered concept and such criteria as TIS, TIG, appraisals, and military education, there is lesser agreement with respect to (1) the role of civilian education in the promotion process and (2) the weighting of the various criteria. In fact, in reviewing the Air Force promotion system, I could not find any reference to a quantification of civilian education within its weighted scoring system.[4] Rather, the Air Force promotion system considered the material to be "supplemental information" for consideration by promotion boards.[5]

In the remainder of this subsection, I examine the Army, Marine Corps, and Navy promotion systems, their scoring criteria, and the weight of education relative to other factors.

Army Enlisted Promotion System

Within the Army enlisted-promotion system, civilian education is considered at both the middle and upper promotion tiers. The middle tier of enlisted ranks includes E-5 through E-6.[6] Although field commanders have a hand in the promotion process by assessing their personnel, a host of other criteria are also considered. Table 5.1 shows the criteria and the maximum number of points associated with each criterion for promotion consideration to E-5 and E-6. *Duty performance* refers to the assessment provided by the servicemember's commander. The *Awards and decorations* category includes military medals and ribbons. *Military education* includes PME; *Military training* refers to specialized,

[3]However, professional military education (PME) is important.

[4]The Air Force uses the following criteria in its weighted airman promotion system (WAPS) for the ranks of E-5 through E-7 (maximum number of points in parentheses)—specialty knowledge test (100), promotion fitness examination (100), performance reports (135), decorations (25), TIG (60), TIS (40)—for a total of 460 points. The E-8 through E-9 WAPS has similar breakouts, but does not include civilian education either.

[5]U.S. Air Force, *Promotion Fitness Examination*, Washington, D.C.: Air Force Pamphlet (AFP) 36-2241, Volume 1, July 1995, Table 5.3.

[6]http://www.perscom.army.mil/select/jrensys.htm, December 15, 1997.

Table 5.1

Promotion Points for Army E-5 and E-6

Item	E-5/E-6 Maximum Number of Points	Percentage of Maximum Total Points
Duty performance	200	25.00
Awards and decorations	50	6.25
Military education	150	18.75
Civilian education	**100**	**12.50**
Military training	100	12.50
Total board points	200	25.00
Total	800	100.00

job-related classes that the military offers. *Total board points* are the number of points scored by the promotion board. The *Civilian education* component of the overall promotion point score can count for a maximum of 100 points within the entire 800-point composite score.

Within the *Civilian education* category, Army enlisted servicemembers can earn education points in the following ways: completing high school or a GED; taking college courses; completing a college degree; and passing DANTES' sponsored exams, such as the College Level Entrance Program (CLEP), or correspondence schools. The following summarizes the maximum number of points an individual can receive for various educational achievements:[7]

- One point for each semester-hour of business, trade school, or college completed.
- Ten points (maximum) for *education improvement*, defined as the following: completing a high school degree, GED, or post-secondary program while on active duty.
- 30 points (maximum) for successfully passing all portions of the CLEP (passing any single section of the five-part exam earns six points).
- Promotion points for military or civilian training or experience when certified by ACE.
- Points for accredited correspondence courses.

[7]U.S. Army, *Enlisted Promotions and Reductions*, Washington D.C.: Army Regulation 600-8-19, November 1991, p. 36.

Navy Enlisted Promotion System

Similar to the Army's promotion system, the Navy's system also has a quantitative scoring methodology for middle-tier promotions (E-4 through E-7).[8] Whereas the Army has a separate category for civilian education, the Navy uses a section called *Awards*, which is a conglomerate score of medals, overseas exercises, *and* education.

Table 5.2 summarizes the overall promotion methodology for the Navy. For promotion to ranks E-4, E-5, and E-6, the *Awards* category counts for approximately 4.5 percent of the entire promotion score. By the time an individual is promoted to E-7, the only two categories that count are standard score and a performance factor; the *Awards* category, which includes educational achievement, is eliminated from the promotion weighted score.

Although the *Awards* category counts for 4.5 percent of the overall promotion score for advancement to ranks E-4 through E-6, the relative point importance of civilian education is further diminished when education in this category is considered in relation to other achievements. Table 5.3 lists a sample of possible achievements, decorations, activities, and educational levels that are counted under the *Awards* category of Table 5.2.

Table 5.2

Navy Promotion Points for E-4 Through E-7[a]

Factor	E-4/E-5 Maximum Points (percentage of total)	E-6 Maximum Points (percentage of total)	E-7 Maximum Points (percentage of total)
Standard score[b]	80 (35%)	80 (30%)	80 (60%)
Performance factor	70 (30%)	92 (35%)	52 (40%)
Length of service	30 (13%)	34 (13%)	
Service in paygrade	30 (13%)	34 (13%)	
Awards	**10 (4.5%)**	**12 (4.5%)**	
PNA exam points[c]	10 (4.5%)	12 (4.5%)	
Total	230 (100%)	264 (100%)	132 (100%)

[a]Adapted from U.S. Navy, *Advancement Manual*. Washington, D.C.: Bureau of Personnel Instruction (BUPERSINST) 1430.16D, July 10, 1991, p. A-3-1.

[b]*Standard score* refers to the score from a professional competency exam.

[c]PNA exam points are additional points a servicemember receives for exemplary performance on written exams and performance.

[8]http://www.nets.navy.mil/homepages/bupers/selectbd/compute.html, December 1, 1997.

Table 5.3

Examples of Awards and Promotion Points for Navy E-4 Through E-6

Award	Point Value
Medal of Honor	10
Navy Cross	5
Distinguished Service Medal	4
Silver Star Medal	4
Legion of Merit	4
Distinguished Flying Cross	4
Navy and Marine Corps Medal	3
Soldier's Medal	3
Bronze Star Medal	3
Purple Heart	3
Commendation Medal	3
Letter of Commendation from President	2
Achievement Medal	2
Combat Action Ribbon	2
Navy Good Conduct Medal	2
Aviation Insignia	2
Bachelor's degree (or above)	**2**
Associate's degree	**1**

SOURCE: Data adapted from U.S. Navy, *Advancement Manual*, Washington, D.C.: BUPERSINST 1430.16D, July 10, 1991, pp. 4-9, 4-10.

From the table, we can see that education in the Navy enlisted promotion process is not weighted as highly as it is in the Army methodology of weighted scores. For example, a Navy E-4 who achieves a bachelor's degree would be awarded two points of a maximum of ten points under the *Awards* category in Table 5.2. This would account for approximately 2/230, or less than 1 percent of the entire promotion score. Needless to say, civilian education is not weighted as much as are other criteria in the promotion of Navy servicemembers to the E-4 through E-6 ranks.

Marine Corps Enlisted Promotion System

The Marine Corps middle-tier enlisted-promotion system (E-4 and E-5) is based on a quantitative methodology that is similar to the other services' and includes several factors: TIG, TIS, performance reviews, and a *Self-education* category. The composite scoring methodology for promotion to E-4 and E-5 is listed in Table 5.4. In calculating the various maximum possible scores for categories, I made several assumptions. For example, the TIG and TIS scores were based on an E-3 who had 8 months' TIG and 9 months' TIS—the minimum requirements for promotion to E-4. It is likely that these numbers would actually be larger for a

Table 5.4

Marine Corps Promotion Points for E-4 and E-5

Factor	Methodology	Maximum Possible Score	Factor As a Percentage of Total
Rifle Marksmanship Score	Shooting Score	—	
Physical Fitness Score	Fitness Score	—	
General Marine Performance (GMP) Score	((Rifle + Physical Fitness)/ 2) × 100	500	27.2
Average Duty Proficiency	Duty Score × 100	500	27.2
Average Conduct	Conduct Score × 100	500	27.2
Time-in-Grade	Months × 5	40	2.2
Time-in -Service	Months × 2	24	1.3
Drill Instructor Bonus	100 × 1	100	5.4
Self-Education Bonus	**Course points × 10 (see Table 5.5)**	75	4.1
Command Recruiting Bonus	20 × number of individuals recruited	100	5.4
Composite Score		1,839	100.0

NOTE: Methodology adapted from U.S. Marine Corps, *Marine Corps Promotion Manual, Volume 2, Enlisted Promotions*. Washington, D.C.: Marine Corps Order (MCO) P1400.32A, March 4, 1992, pp. 2-16a–2-22a.

realistic scenario. The *Self-Education Bonus* category is based on points awarded for taking correspondence, vocational, and college courses. Table 5.5 summarizes the type of course and points awarded for its completion.

As with the Navy, it does not appear from these calculations that civilian education makes up a large percentage of an individual's total score. However, the relative importance of scores changes as different point values for other

Table 5.5

Courses and Promotion Points

Course	Points
Any certified DoD correspondence course	1.5
Extension school subcourse	1.5
CLEP Test (each portion)	1.0
College course (semester or quarter)	1.0
Vocational school course (semester)	1.0

NOTE: The maximum number of self-education points that can be earned is 7.5. No points are awarded for high school–related courses or courses taken prior to current grade status. More-detailed information can be found in U.S. Marine Corps, MCO P1400.32A, Chapter 1, March 1992, p. 2-20.

categories are considered as well. The numbers presented here are for an individual who maximizes each category. As the number of points per category decreases relative to maximizing the education category, education will become relatively more important within the overall score.

Comparison of Enlisted Promotion Processes

It is clear from this description of the enlisted-promotion point systems that formal, civilian education does not play a significant role in determining the promotion points of enlisted personnel. This is an observation and is intended neither as a value judgment on the current process nor as a recommendation that the military value education more or less than it currently does.

Other observations recorded in this section include that (1) education is not considered in the noncompetitive junior enlisted promotions; (2) the middle tier of enlisted ranks receives some (limited) points for job performance, TIG, TIS, and professional military education; and (3) the most-senior tier of NCOs receives a majority of its promotion points from management and leadership experience.

Likewise, across the services, the role of educational achievement in determining points appears to vary significantly. In the Air Force, civilian education is not explicitly figured into the overall performance score. This is not to imply that promotion boards may not be influenced by an individual's personnel file, which lists his or her education, but, rather, that no criteria have been stated for quantitatively valuing the worth of college experience. In the Navy and the Marine Corps, the weight of education relative to total promotion scores is less than 10 percent. The Army has the highest relative score within the promotion framework: A servicemember can earn as much as 12 percent of maximum points by having significant civilian educational experience. Similarly, the importance of civilian education relative to other criteria tends to decrease as a servicemember is promoted through the ranks. All three of the services that have an educational component to their promotion methodology weight experience more heavily than they do civilian education. Note that, while education does not contribute a large percentage of total promotion points in any of the services, in a competitive environment even a couple of extra points could mean the difference between being promoted or not.

Officer Promotions

Unlike enlisted promotions, which tend to be based on quantitative scores within a structured framework, the officer-promotion process is less transparent. Officer promotions are not based on *published* point values as enlisted promotions are. No scoring criteria have been published to provide a quantification and relative ranking of individual variables. For example, in the Army enlisted-promotion system, civilian education is given a weight of up to 100 out of a possible 800-point overall score. The more education achieved, the more points are received and the more likely a person is to be promoted. Although the services do not publish quantitative criteria for scoring officer records or attributes, it is well known within the promotion process that those who are promoted tend to have achieved solid records of performance, obtained the right jobs, and taken required professional military education courses.

Less uniform across the services is the understanding of the role formal civilian education plays in the promotion process. The remainder of this subsection focuses on how the Air Force values the formal education of its officers. To consider a more robust analysis of the subject, it is necessary to consider how the other services perceive this issue; however, it was not possible to find published, contemporary information related to this subject within the Army, the Navy, or the Marine Corps. Note that Hosek et al. report that it appears that most officers progressing beyond O-3 now have master's degrees.[9]

During 1997, the Air Force tried to demystify the promotion process by openly discussing those attributes of officers that appear to be important or, at the very least, common across those who were selected for promotion.[10] An Air Force Military Personnel Center (AFMPC) study of promotion-board results from the last four major boards and the last three lieutenant colonel and colonel boards was prompted by two perceptions within the officer force: (1) that a captain must have an advanced degree in order to be promoted to major and (2) that a captain without an advanced degree will not be selected even if he or she receives a promote recommendation on the Promotion Recommendation Form (PRF), from his or her senior rater. The 1996–1997 study revealed the following trends:[11]

---

[9]S. D. Hosek et al., "Race and Gender Differences in Officer Career Progression," Santa Monica, Calif.: unpublished RAND research.

[10]Information is taken from the Air Force Personnel Center (AFPC) homepage, Randolph AFB, http://www.afpc.af.mil/publicat/demystf/demyst.htm, October 10, 1997.

[11]The results listed here are taken directly from AFPC's analysis of the results. The purpose of this subsection is not to critique its methods of analysis but, rather, to present how it marketed the results to the USAF officer population.

- A majority of the officers meeting the major's board over the past four years had an advanced (graduate or professional) degree.
- Officers with an advanced degree were selected at a higher rate than officers without an advanced degree.
- As an officer progresses up the grade ladder, the percentage of eligibles with an advanced degree increases significantly, but the promotion opportunity decreases for both those with and those without an advanced degree.

Overall results for officers competing for promotion to the grades of major, lieutenant colonel, and colonel were as follows:

For promotion to major:

- 68 percent of the officers meeting the promotion board in the primary zone (IPZ) had an advanced degree.
- 40 percent of the pilots had an advanced degree; the pilot promotion rate was 81 percent.
- 64 percent of the navigators had an advanced degree; the navigator selection rate[12] was 77 percent.
- 79 percent of the nonrated[13] officers meeting the boards had completed their advanced degrees; the nonrated selection rate was 71 percent.

For promotion to lieutenant colonel:

- 87 percent of the IPZ officers meeting the boards had an advanced degree; the overall IPZ select rate was 63 percent.
- 79 percent of the pilots had an advanced degree; the pilot promotion rate was 74 percent.
- 84 percent of the navigators had an advanced degree; the navigator selection rate was 59 percent.
- 90 percent of the nonrated officers meeting the boards had completed their advanced degrees; the nonrated selection rate was 61 percent.

---

[12]*Selection rate* is used synonymously with *promotion rate* in this subsection.

[13]The term *nonrated* refers to USAF officers who do not have an aeronautical rating (pilot or navigator).

For promotion to colonel:

- 94 percent of the IPZ officers had an advanced degree; the overall IPZ selection rate was 42 percent.
- 92 percent of the pilots had an advanced degree; the pilot promotion rate was 45 percent.
- 95 percent of the navigators had an advanced degree; the navigator selection rate was 29 percent.
- 96 percent of the nonrated officers meeting the boards had completed their advanced degrees; the nonrated selection rate was 46 percent.

According to the Air Force, and similarly to the other services' officer-promotion systems, having an advanced degree is just one factor considered in the promotion process. Promotion boards evaluate records using a "whole-person" concept, which includes such factors as job performance, leadership, professional competence, breadth and depth of experience, job responsibility, academic and professional military education, and specific achievements. From this list of criteria, promotion-board members from the past three boards held at AFMPC indicated that job performance was considered to be the most important factor in promotion success. They rated advanced education as the least important of the eight factors. However, they also indicated that an advanced degree could be a tiebreaker between two otherwise equal records.[14]

[14]Information is taken from the Air Force Material Personnel Center (AFMPC) homepage, Randolph AFB, http://www.afpc.af.mil/publicat/demyst/demyst.htm, October 10, 1997.

6. Conclusions

The information presented here was an inventory of educational benefits and officer-commissioning programs that are available to servicemembers in the active-duty U.S. military. The goal of this work was to provide background and contextual information for a comprehensive report that will explore ways of attracting college-eligible youth into the military.

The description of the various benefits, opportunities, and commissioning methods implies that the different services have unique strategies for accessing both officers and enlisted personnel, as follows:

- The three primary sources of officer commissioning in the U.S. military are the federal service academies, the Reserve Officer Training Corps, and Officer Training/Candidate School; direct appointment is also an avenue. Whereas the Marine Corps relies most heavily upon OCS, the Air Force, Army, and Navy draw upon ROTC for most of their officer corps and offer different types of monetary incentives.
- Although enlisted personnel have several methods for earning officer commissions, there are a limited number of slots for these programs. The Air Force, the Navy, and the Marine Corps have many special programs available for educating and subsequently commissioning enlisted servicemembers. The Army relies primarily on the use of direct application to OCS, the academy preparatory school, and the use of its "Green-to-Gold" ROTC Program.
- Many opportunities exist for active-duty military personnel to further their civilian education. Use of both tuition assistance and competitive, special programs is present in all of the services. The Army, Marine Corps, and the Navy attract personnel into the enlisted corps by offering the College Fund, which promises money for school after the military. The Air Force does not have a College Fund and uses the Community College of the Air Force, technical experience, special programs, and TA for educating its personnel while they are on active duty.
- The importance of advanced education in the military promotion process is not transparent. While the enlisted-promotion process awards a small number of points for higher education, job performance, time-in-grade, and technical skills appear to be the main criteria for advancement. The role of

advanced education within the officer promotion process is also unclear. However, today, most officers who proceed beyond O-3 have a master's degree.

Appendix

A Brief Description of the U.S. Military

The Regular Components

Besides deciding whether or not to enter the military, an individual must also choose a service. Whether as an officer or as an enlisted member, a servicemember can serve either in an active-duty or a reserve capacity in today's military. Regular (active-duty) components include the armed forces—Air Force, Army, Navy, Marine Corps—and the Coast Guard.[1] Figure A.1 shows the number of active-duty commissioned officers, warrant officers, and enlisted personnel at the end of calendar year 1996.[2]

Reserve Components

Whereas an active-duty status requires full-time service, a reserve status generally involves a part-time commitment. The Armed Forces Reserve Act of 1952 identified the seven reserve components in the U.S. military: the Army National Guard, the Army Reserve, the Naval Reserve, the Marine Corps Reserve, the Air Force Reserve, the Air National Guard, and the Coast Guard Reserve. The first six components are part of the Department of Defense; the Coast Guard Reserve, like its active counterpart, is part of the Department of Transportation during peacetime. A unique aspect of reserve-component management is the dual state-federal status of the Army and Air National Guards. During peacetime, National Guard units report to the governor of the state in which they are located. When federalized, they report to the federal government via their respective service organizations.[3]

Unlike an officer on active duty, who may either possess a regular or a reserve commission, officers in the Reserve or National Guard possess reserve

---

[1]During peacetime, the Coast Guard is part of the Department of Transportation.

[2]Office of the Secretary of Defense, *Selected Manpower Statistics*, Washington, D.C., 1996, p. 49.

[3]For more information on the structure of the Reserves, see Roger A. Brown et al., *Assessing the Potential for Using Reserves in Operations Other Than War*, Santa Monica, Calif.: RAND, MR-796-OSD, 1997; for a description of the roles of the National Guard, see Roger A. Brown et al., *Assessing the State and Federal Missions of the National Guard*, Santa Monica, Calif.: RAND, MR-577-OSD, 1995.

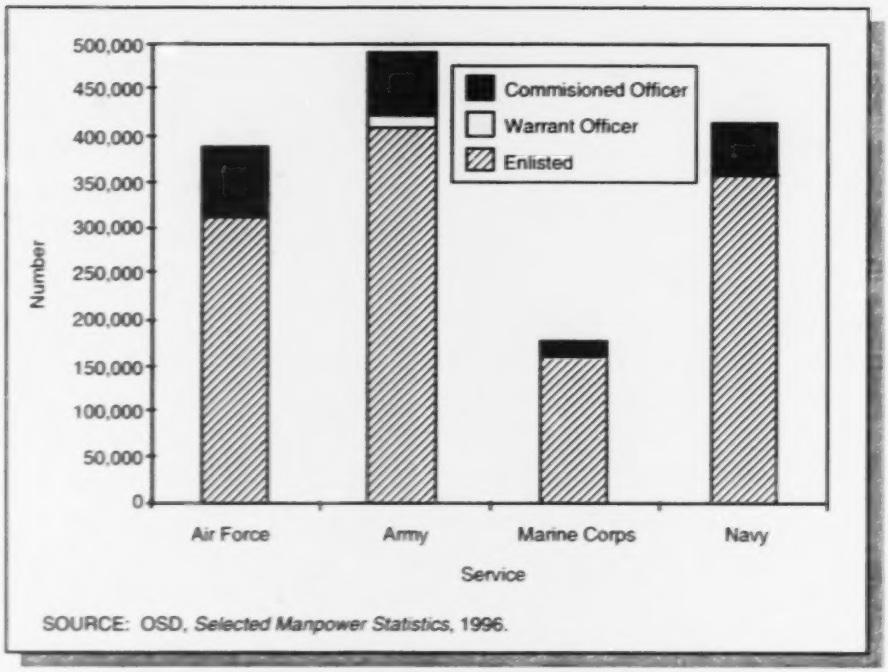


Figure A.1—Active-Duty Personnel, by Service (CY96)

commissions only. Figure A.2 shows the relationship of the reserves to active forces within the military services in CY96.

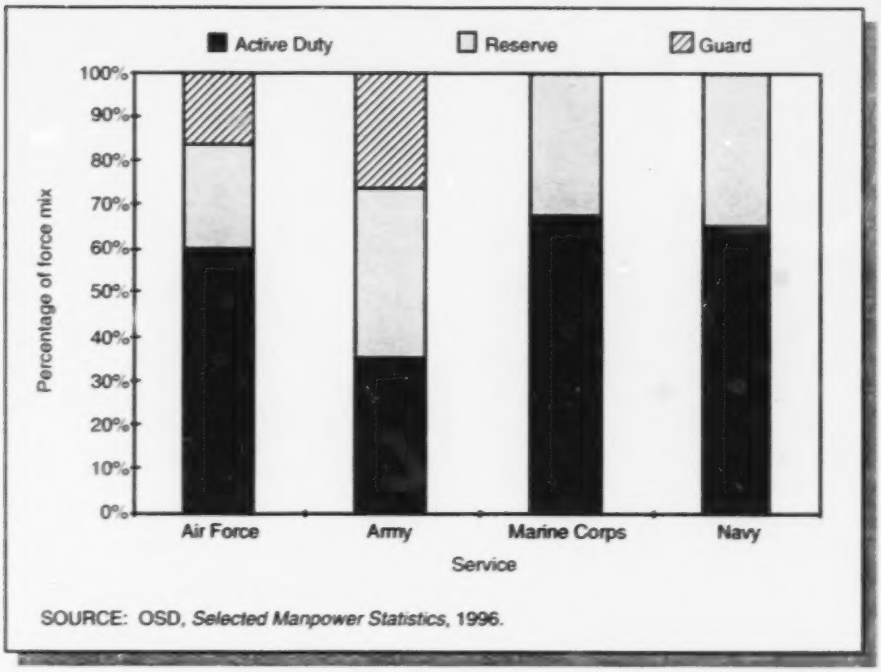
Rank Structure

A defining aspect of the military is organizational hierarchy, which tends to follow a well-defined rank structure made up of three levels: commissioned officers, warrant officers, and enlisted.[4] The relationship of the three defines not only status but grade and authority as well. Within each status are specific ranks that individuals achieve by promotion, which is based on a combination of education, performance, and tenure.[5] The relationship of education to promotion was discussed in Section 5.

---

[4]U.S. Code Title 10, Section 10, "Definitions of the Armed Forces," defines *rank* as "the order of precedence among members of the armed forces." *Grade* is defined as "a step or degree, in a graduated scale of office or military rank, that is established and designated as a grade by law or regulation."

[5]Some individuals enter in higher ranks because of prior education and experience. There are also unique circumstances for attaining temporary (frocking) or permanent (astronauts) rank.



SOURCE: OSD, *Selected Manpower Statistics*, 1996.

Figure A.2—Relationship of Active, Reserve, and Guard Forces in the Total Military Force Mix (CY96)

Upon choosing the military as an occupation, individuals usually enter at one of two grades: by enlisting, they will enter as an E-1, E-2, or E-3; by being commissioned as an officer, they will generally enter as an O-1. The only exception to this latter rule is for individuals who complete specialized, professional training, such as medical, legal, or religious schooling. Such officers enter through a direct appointment and usually join the military as O-3s. Tables A.1, A.2, and A.3 summarize grades and ranks and their titles across all services.

Table A.1

Commissioned-Officer Grades and Ranks

Grade	Service			
Commissioned Officer	Air Force	Army	Marine Corps	Navy
O-10	General	General	General	Admiral
O-9	Lieutenant General	Lieutenant General	Lieutenant General	Vice Admiral
O-8	Major General	Major General	Major General	Rear Admiral
O-7	Brigadier General	Brigadier General	Brigadier General	Rear Admiral Lower Half
O-6	Colonel	Colonel	Colonel	Captain
O-5	Lieutenant Colonel	Lieutenant Colonel	Lieutenant Colonel	Commander
O-4	Major	Major	Major	Lieutenant Commander
O-3	Captain	Captain	Captain	Lieutenant
O-2	1st Lieutenant	1st Lieutenant	1st Lieutenant	Lieutenant Junior Grade
O-1	2nd Lieutenant	2nd Lieutenant	2nd Lieutenant	Ensign

Table A.2

Warrant-Officer Grades and Ranks

Grade	Service			
Warrant Officer	Air Force	Army	Marine Corps	Navy
W-5	Air Force does not have Warrant Officers	Chief Warrant Officer Five	Chief Warrant Officer Five	
W-4		Chief Warrant Officer Four	Chief Warrant Officer Four	Warrant Officer Four
W-3		Chief Warrant Officer Three	Chief Warrant Officer Three	Warrant Officer Three
W-2		Chief Warrant Officer Two	Chief Warrant Officer Two	Warrant Officer Two
W-1		Warrant Officer One	Warrant Officer One	Warrant Officer

Table A.3

Enlisted Grades and Ranks

Grade	Service			
Enlisted	Air Force	Army	Marine Corps	Navy
E-9	Chief Master Sergeant	Sergeant Major or Command Sergeant Major	Sergeant Major or Master Gunnery Sergeant	Master Chief Petty Officer Senior Chief Petty Officer
E-8	Senior Master Sergeant	First Sergeant or Master Sergeant	First Sergeant or Master Sergeant	Chief Petty Officer
E-7	Master Sergeant	Sergeant First Class	Gunnery Sergeant	Petty Officer First Class
E-6	Technical Sergeant	Staff Sergeant	Staff Sergeant	Petty Officer Second Class
E-5	Staff Sergeant	Sergeant	Sergeant	Petty Officer Third Class
E-4	Sergeant or Senior Airman	Corporal or Specialist	Corporal	Seaman
E-3	Airman First Class	Private First Class	Lance Corporal	Seaman Apprentice
E-2	Airman	Private	Private First Class	Seaman Recruit
E-1	Airman Basic	Private	Private	

Bibliography

Air Force Academy homepage, http://www.usafa.af.mil/.

"Air Force ROTC Professional Officer Course–Early Release Program," *Airman Magazine*, May 1996.

"Air Force Streamlines Commissioning Process," *Air Force News Service*, December 13, 1996.

"Airman Scholarship and Commissioning Program," *Airman Magazine*, May 1996.

"Airmen Can Now 'SOAR'," *Air Force News Service*, February 1997.

American Council on Education, *Guide to the Evaluation of Nontraditional Learning Experiences in the Armed Forces*, Washington, D.C., n.d.

Asch, Beth, Rebecca Kilburn, and Jacob A. Klerman, *Attracting College-Bound Youth into the Military: Toward the Development of New Recruiting Policy Options*, Santa Monica, Calif.: RAND, MR-984-OSD, 1999.

Assistant Secretary of Defense for Force Management Policy, *Voluntary Education Programs*, Washington, D.C.: DoD Instruction 1322.25, February 5, 1997.

Assistant Secretary of Defense for Force Management Policy, *Voluntary Education Programs for Military Personnel*, Washington, D.C.: DoD Instruction 1322.8, January 6, 1997.

Assistant Secretary of Defense for Reserve Affairs, *An Introduction to the Reserve Components of the United States*, Washington, D.C., February 21, 1995.

Bailey, T., *Changes in the Nature and Structure of Work: Implications for Skill Requirements and Skill Formation*, Washington, D.C.: National Center for Research in Vocational Education, MDS-007, May 1990.

Brown, Roger A., et al., *Assessing the Potential for Using Reserves in Operations Other Than War*, Santa Monica, Calif.: RAND, MR-796-OSD, 1997.

Brown, Roger A., et al., *Assessing the State and Federal Missions of the National Guard*, Santa Monica, Calif.: RAND, MR-577-OSD, 1995.

Cohen, William S., Secretary of Defense, *Report of the Quadrennial Defense Review*, Washington, D.C., May 1997.

Community College of the Air Force (CCAF) homepage, http://www.au.af.mil/au/ccaf/, June 1997.

Compart, Andrew, "Tuition Aid Rules Change," *Navy Times*, July 28, 1997, p. 3.

Defense Activity for Non-Traditional Education Support (DANTES), *Servicemembers Opportunity Colleges Guide: 1995–1997*, Pensacola, Florida, September 1997.

Department of the U.S. Army, *Enlisted Promotions and Reductions*, Washington, D.C.: U.S. Army Regulation (USAR) 600-8-19, November 1991.

Department of the U.S. Army, U.S. Army Regulation (USAR)EC 621-1, Washington, D.C.

Department of the U.S. Navy, *Advancement Manual*, Washington D.C.: BUPERSINST 1430.16D, July 1991.

Department of the U.S. Navy, *Marine Corps Promotion Manual*, Washington, D.C.: MCO P1400.32A, March 1992.

Department of Veterans' Affairs, 1997 GI Bill pamphlet, http://www.va.gov/benefits/Education/C30pam.htm, January 10, 1998.

Department of Veterans' Affairs, 1997 VEAP benefits pamphlet, http://www.va.gov/benefits/Education/C30pam.htm, January 10, 1998.

DoD Voluntary Education homepage, http://voled.doded.mil/dod_docs/dod1322.8.htm, June 1997.

Goldich, Robert L., *The DoD Service Academies: Issues for Congress*, Washington, D.C.: Congressional Research Service, February 6, 1997.

Goldman, Charles, et al., *Staffing Army ROTC at Colleges and Universities: Alternatives for Reducing the Use of Active-Duty Soldiers*, Santa Monica, Calif.: RAND, MR-992-A, 1999.

Gotz, Glenn A., Briefing on Military Manpower given to the RAND Graduate School Executive Seminar, Santa Monica, Calif., July 16, 1997.

Hanser, Larry M., *Understanding the Skills Gap: Approaches from Job Analysis*, Washington, D.C.: National Center for Research in Vocational Education, MDS-1027, November 1996.

Higher Education Publications, *The HEP Higher Education Directory*, Falls Church, Va., 1997.

National Center for Education Statistics, *The 1996 Digest of Education Statistics*, Washington, D.C.: U.S. Department of Health, Education, and Welfare, Education Division, 1996.

Office of the Assistant Secretary of Defense (Force Management Policy), *Population Representation in the Military Services, 1995*, Washington, D.C., November 1996.

Office of the Assistant Secretary of Defense (Force Management Policy), *Population Representation in the Military Services, 1997*, Washington, D.C., 1998.

Office of the Secretary of Defense, *Reserve Component Programs: Report of the Reserve Forces Policy Board*, Washington, D.C., March 1996.

Office of the Secretary of Defense, *Selected Manpower Statistics*, Washington, D.C., 1980, 1985, 1990, 1995, and 1996.

Orvis, Bruce R., M. T. Childress, and J. M. Polich, *Personnel Quality and the Performance of PATRIOT Air Defense System Operators*, Santa Monica, Calif.: RAND, R-3901-A, 1992.

"Regular Air Force Appointments Explained," *Air Force News Service*, July 15, 1995.

Robbert, Albert A., Brent Keltner, Kenneth J. Reynolds, Mark D. Spranca, and Beth A. Benjamin, *Differentiation in Military Human Resource Management*, Santa Monica, Calif.: RAND, MR-838-OSD, 1997.

Servicemembers Opportunity Colleges homepage, http://voled.doded.mil/soc/.

Simons, William E., "The Service Academies and Higher Education," *U.S. Naval Institute Proceedings*, October 1961, pp. 41–50.

Thirtle, Michael R., *Air Force Officer Accessions: A Brief Review*, Santa Monica, Calif.: RAND, P-8001-RGS, July 1997.

U.S. Air Force, *Promotion Fitness Examination (PFE) Study Guide*, Washington, D.C.: Air Force Pamphlet 36-2241, Volume 1, July 1995.

U.S. Army, *Enlisted Promotions and Reductions*, Washington D.C.: Army Regulation 600-8-19, November 1991.

U.S. Army Recruiting (USAREC), *Montgomery GI Bill (MGIB), Army College Fund, and Loan Repayment Program*, Regulation 621-1, 1997.

U.S. Army Training and Doctrine Command (TRADOC) homepage, http://www.tradoc.army.mil/rotc/gg.html, October 1997.

U.S. General Accounting Office, *Academy Preparatory Schools*, Washington, D.C.: GAO/NSIAD-94-56R, 1994.

U.S. General Accounting Office, *DoD Service Academies: Academy Preparatory Schools Need a Clearer Mission and Better Oversight*, Washington, D.C.: GAO/NSIAD-92-57, March 1992.

U.S. General Accounting Office, *DoD Service Academies: Problems Limit Feasibility of Graduates Directly Entering the Reserves*, Washington, D.C.: GAO/NSIAD-97-89, March 1997.

U.S. General Accounting Office, *Military Recruiting: More Innovative Approaches Needed*, Washington, D.C.: GAO/NSIAD-95-22, December 1994.

U.S. General Accounting Office, *Officer Commissioning Programs: More Oversight and Coordination Needed*, Washington, D.C.: GAO/NSIAD-93-37, November 1992.

U.S. Marine Corps, *Marine Corps Promotion Manual, Volume 2, Enlisted Promotions*, Washington, D.C.: Marine Corps Order (MCO) P1400.32A, March 4, 1992.

U.S. Marine Corps, *FY96 Broadened Opportunity for Officer Selection and Training (BOOST) Program*, Washington, D.C.: ALMAR 119/96, March 22, 1996.

U.S. Marine Corps, *FY96 Marine Enlisted Commissioning Education Program (MECEP) Selection*, Washington, D.C.: ALMAR 113/96, March 22, 1996.

U.S. Marine Corps, *FY96 Meritorious Commissioning Program Selection*, Washington, D.C.: ALMAR 148/96, April 12, 1996; ALMAR 301/96, August 20, 1996; ALMAR 413/96, November 22, 1996.

U.S. Marine Corps, *FY97 Marine Enlisted Commissioning Education Program (MECEP) Selection*, Washington, D.C.: ALMAR 082/97, March 14, 1997.

U.S. Marine Corps, *FY97 Broadened Opportunity for Officer Selection and Training (BOOST) Program*, Washington, D.C.: ALMAR 269/96, July 23, 1996.

U.S. Navy, *Advancement Manual*, Washington, D.C.: Bureau of Personnel Instruction (BUPERSINST) 1430.16D, July 10, 1991.

U.S. Navy Education and Training Center homepage, http://www.cnet.navy.mil/newport/news35.htm, October 1997.

U.S. Navy, *Selection of Applicants for the Seaman to Admiral Commissioning Program*, Washington, D.C.: NAVADMIN 232/97, September 26, 1997.

Ward, Michael P., Hong W. Tan, *The Retention of High-Quality Personnel in the U.S. Armed Forces*, Santa Monica, Calif.: RAND, R-3117-MIL, February 1985.

MR-981-OSD

ISBN 0-8330-2699-2